New Orleans Medical
and
Surgical Journal

Vol. 96 JUNE, 1944 No. 12

THE PRESIDENT'S ADDRESS*

THE PROGRESS OF MEDICINE AND SURGERY IN THE UNITED STATES IN THE LAST FIFTY YEARS AND WHAT THE FUTURE HOLDS FOR IT UNDER THE WAGNER-MURRAY-DINGELL BILL

C. C. deGRAVELLES, M. D.
NEW IBERIA

When I say that it is a pleasure and a great honor to address you at this time, I am not merely indulging in the conventional introductory remark. I have a high regard for this organization, its members and its activities.

I dare say that no branch of science has made more progress in the last fifty years than has the science of medicine.

It is a truism that progress depends on the acquisition and diffusion of knowledge. Before he had speech, man could have been but little better than his brute neighbors, although if he then had any skill with his hands and knew how to make and keep fire, these things gave him advantages. But speech having been acquired, it served, until he acquired knowledge, to perpetuate and to multiply error in regard to the world at large, its nature and governance, and to spread fear and superstition.

Gradually, gods, devils and witches assumed control of the unknown, and as priests and shamans developed, their chief office was to appease and placate these strange beings. So for centuries and ages the main and only defenses against disease were prayers, magic, incantations, sacrifices and taboos.

In early times there was no system of physic; each sufferer, like the beasts of the fields, using such means of cure as instinct dictated, or afterward, as was suggested by another sufferer who had derived benefit from certain remedial agents, an account of which he was required to deposit in some public place or temple. This was the early custom in Assyria, Egypt, and Greece. As votive tablets and other like documents accumulated in the temples, they were suitably arranged, revised, and transcribed by the priests *to whom only* they became accessible and who consulted the work, which was known as the "sacred book," to find the remedies applicable to the cases of disease under their observation. Such, in Greece, was the practice until the great reformer Hippocrates came to the front and finally established a sound system of medicine, bequeathing to the world such an imperishable record of his greatness in the science and literature of the healing art. Notwithstanding the Hippocratic school, the priests, who had a powerful hold on public credulity, would not relinquish the practice of healing diseases in their crude way and, for a long time, continued to be the medical advisers of the majority of the Greek people. In Egypt, none but the priests were permitted to minister to the sick and, says Herodotus, there was one specially devoted to the treatment of each kind of disease. There, then was the birth of specialism. Among the early Israelites the prophets, priests, and Levites were the only physicians. This ancient custom of combining the offices of physician and priest was adopted by the Christian clergy and prevailed, with but few exceptions, until the middle of the eighteenth century.

Early man moistened his bruises with sa-

*Delivered at annual meeting April, 1944.

liva, he extracted the thorns which lodged in his flesh, he used a pointed stick to dig sandfleas from his skin, he put leaves or mud or clay on his wounds, he tasted herbs and some he spat out and some he swallowed, he was rubbed or stroked when in pain, his broken bones were splinted with branches, and when bitten by a venomous animal he sucked the poison from his body or his friends did it for him. Medicine is a natural art, conceived in sympathy and born of necessity; from these instinctive procedures developed the specialized science that is practiced today.

America is the youngest of the great nations, and if it seems strange that we know no more of the first English physicians in America than of the first Greek physicians in Rome, the same reason is operative in both instances. Eminent physicians remain at home, if for no other purpose than to annoy their rivals, and are not likely to be found on the first ship that touches a new shore.

The practitioners who first set foot on American soil have left us nothing except their names. Among the Jamestown pioneers were the physicians Thomas Wootton, whose possible knowledge of dietetics was of little avail, since he was compelled for a considerable time to subsist on crabs; and Walter Russell, who treated both Captain Smith and an Indian chief. The following year, Anthony Bagnall, surgeon to the fort, while visiting his patients, received an Indian arrow through his heart. It seems that young America did not agree with these medical adventurers, who soon disappeared from the colony. In the fall of 1609, the valiant John Smith, being wounded by the explosion of a bag of gunpowder, was compelled to return to England, "for there was neither chirurgeon nor chirurgery at the fort." Upon the arrival of Lawrence Bohun in Virginia, he was appointed physician-general of the colony, for he had no competition; in the spring (1611) he sailed with the sick Lord Delaware to the West Indies and was killed by a Spanish warship.

The *Mayflower* carried 102 passengers from the old to the new Plymouth; they landed in winter, and the snows covered half of them; a dozen men, and a small group of women and children, saw the first summer. Among the survivors was the butcher's son, Samuel Fuller, deacon and physician. He had been married thrice before coming to America, but of his medical education we know nothing.

As the sole practitioner in the settlement, he was in considerable demand, and his death during a smallpox epidemic (1633) "was most deeply lamented by the colonists." The combination of preacher-physician—called by Cotton Mather an "angelic conjunction"—or even preacher-physician-pedagogue, was common in early America, since one profession did not suffice for a livelihood. For example, John Wilson, who graduated at the first Commencement of Harvard College (1642), is described as "pastor, schoolmaster, and physician." The practice of law was sometimes added, and almost invariably the physician was also a farmer.

There was no real American medical literature until after the Revolution, when Benjamin Rush (1745-1813) came into prominence. Five medical schools were started in the United States before 1800, but only two survived, those of the University of Pennsylvania (1765) and Harvard University.

American medicine has no antiquity, but in the young story are bold deeds. By candle-light in a New Hampshire town, a surgeon saw a lad bleeding to death from a wounded artery in the neck; it was too late to seek trained assistants, and aided only by the patient's mother, he saved the fast-ebbing life; he rode off on horseback without plaudits—he had been rejected by Harvard because he lacked the preliminary education—but he was the first in history who tied the common carotid. In America the ligature was first placed around such important arteries as the innominate subclavian and common iliac. In the backwoods of Kentucky a woman was first relieved of ovarian tumor, and among the

wilds of Canada the human stomach was first seen and studied *in situ*. An American pen wrote the first burning protest against the slaughter of mothers in childbed, and an American knife removed the vesico-vaginal fistula from the hopeless afflictions of the female sex.

A primitive forest on our northern border surrounded the laboratory where chloroform was discovered. From the Massachusetts General Hospital first arose the vapor of ether that has spread like a benediction over the earth. The injection of cocaine into nerves, the production of spinal analgesia, and the localization of surgical shock, are of American origin. Other nations have watched us suture blood vessels, grow tumors, transplant organs, rejuvenate tissues, cultivate nerve-cells outside the organism, and produce normal larvae by chemical means from the unfertilized eggs of the sea-urchin. The fatherless frog was born in America.

Medical progress has been no accident. Too little is heard these days about the record of medical men in bringing modern medicine to every part of the country.

This is a big country. It is not chance alone that has placed the last word in medical equipment and technic within reach of nearly every emergency. The doctors, in cooperation with local communities, have been largely responsible. But they could not have done it without the help of a central medical organization constantly disseminating the results of scientific research and discovery.

That organization has been the American Medical Association. Of its task, Hygeia has this to say: "The changes of a developing civilization, great as they have been, are slight compared to the prodigious advances in medical science, largely in the last half century. It is this circumstance of prodigious medical advance on which the American Medical Association was built. It educates its members — through meetings, exhibits, its many periodicals, its councils and its committees and in many other ways. The benefits of all these activities have been passed on to the public—the ultimate consumer."

Medical science in this country has not "just growed." It was created and made available to all by the American medical system.

The American Medical Association is a national society of physicians, founded in 1847, as a result of a national convention held in 1846, to raise the standard of medical education in the United States. Its present membership is more than 98,000. Its purposes are to promote the science and art of medicine; to organize the medical profession and safeguard its interests; to elevate the standard of medical education and practice; to bring about the enactment of uniform legislation for the public welfare; and to protect public health and form public opinion in regard to problems of hygiene. The association publishes "The Journal of the American Medical Association," and five other scientific journals, dealing with special fields of medicine, as well as "Hygeia"—A Journal of Individual and Community Health.

One of the most famous American practitioners of the past fifty years was Sir William Osler (1839-1919), Canadian by birth, who taught and practiced many years in the United States, and whose "Principles and Practice of Medicine" is the best English textbook of our time.

In the short span of fifty years—really short as history is written—American medicine has moved forward to a position of universally recognized world leadership. It has provided a more effective and more widely and evenly distributed medical care than had ever been provided anywhere at any time.

It was only yesterday—as the time is measured—when cholera and smallpox marched unchecked back and forth across continents, killing half the populations of vast areas and wiping out entire towns and villages. These dread killers have been checked. During this period of fifty years typhoid fever, diphtheria, diabetes, tuberculosis, pernicious anemia and a score of lesser ailments have been made to yield to

the science and skill of the American physician. Actually, during this short period, the life span of man has been doubled. In 1790 the life expectancy was 35 years—today it is 62 years. These achievements are without parallel in the history of the progress of mankind.

Medical attention in 1943 was focused particularly on penicillin. Especially significant were advances in anesthesia, including spinal anesthesia and the injection of anesthetic substances directly into the blood. In surgery, attention was focused, because of the war, on the treatment of infected wounds and on shock. The exceedingly low mortality rate for the wounded was accredited to these several factors. The birth rate for 1943 was the highest in the history of the United States, increasing to 24 births per 1,000 population. Nineteen forty-three was the fourth year in succession in which the birth rate increased.

Such facts are the best possible tribute to the achievements of American medicine. And, at the same time, they are the best possible argument against any change in our medical system that would regiment, socialize, or otherwise disrupt the practice of medicine in this country. Our kind of medicine is private medicine. Under it, the patient is completely free to select the doctor of his choice. There is no compulsion, and a doctor's success is not dependent on his political affiliations. That is the kind of medicine which has given the American people the finest average standard of health on earth.

An insidious bill intended to increase Federal control over the private lives and affairs of the American people was introduced in the Senate on June 3, 1943, by Senator Robert F. Wagner, of New York, on behalf of himself and Senator James Murray, of Montana. It is known as Senate Bill No. 1161. This is one of the many bills introduced in recent years which seemed so absurd on the face of them that nobody would suppose they had a chance of becoming law. But sometimes they do. For that reason I am alarmed at every piece of proposed legislation, no matter how preposterous and impossible it seems, which threatens to extend Federal control over everything.

Senate Bill No. 1161 proposes nothing less than to buy up the medical profession in the United States and run it as a government monopoly. The price would be a part of approximately $12,000,000,000, which the bill proposes to raise annually by taxation, mainly from pay roll taxes. Of this enormous sum $3,000,000,000 is to be allocated each year to provide medical care and hospitalization for the American people. Administration of this magnificent medical monopoly, according to the bill, would be in the hands of the Surgeon General of the Public Health Service. He would have power and authority to hire doctors and establish rates of pay. This would probably mean that he would indirectly determine the salaries of all private doctors, if there should happen to be any of them left in business. He would establish fee schedules for all surgical and medical services. He would decide the qualifications of specialists. He would determine how many patients a physician might have, and decide arbitrarily what hospitals or clinics could provide services for patients. It is needless to say that this would place a great deal too much power and authority in the hands of one man, or one Federal bureau. Actually it would be the power of life and death over the American people. It would make medicine and surgery one of the world's greatest political rackets. It seems incredible that anybody will take this bill seriously. But two Senators, at least, thought it worth while to introduce it in Congress.

The medical profession of the United States looks upon this legislation with great concern. It views the possible results with absolute alarm. There has never been a time when the medical profession of the United States has not been equal to whatever health emergencies and demands made upon it. It has always been free to carry on teaching and practice without hamper or hindrance from any person or agency. It has enjoyed the freedom of initiative and

enterprise, as have others in our country. The Wagner Bill takes away the privilege of the doctor in exercising his own judgment and perfecting himself by constant study and research. Freedom of action based on his own judgment, medical teaching, and the confidence as exists today in the patient's mind for him, will be destroyed. Initiative and incentive have made excellent doctors, to such a degree that we have now the finest type of medical practice in the world—in surgery, general medicine, preventive medicine, research and the various specialties.

The bill does not reach the indigent who will still be left to the care of other Government agencies. It has no provision for long-continued hospitalization as required for the tuberculous, the chronically crippled, or insane. This large army of helpless persons will still be wards of the Government, while workers are compelled to pile up enormous sums of money under the Wagner Bill, supposed to be spent upon themselves. With all this great amount of money it can be easily seen that little, if any, of it will be used toward helping the sick or hospitalizing sufferers, because of the tremendous red tape and army of operators who will absorb much of the funds before it reaches the proper place.

Dr. Morris Fishbein in Hygeia says: "In its consideration of various plans for providing people with medical care, the American Medical Association has emphasized that the quality of medical service is paramount. The conditions associated with the administration of medical service must be examined with relation to their effects on the quality and sufficiency of such service.

"The health of the nation cannot be guaranteed by any formula which places the economics of medical service above the advancement of medical science and the quality of medical service.

"In every Governmental directed or compulsory system of medical service the quality of the service is inevitably diminished in the attempt to decrease costs, particularly when the added burden of Governmental administration is placed on the funds available for medical care.

"In the years that have passed since the Federal Security Agency was established, its division for the study of medical care has come forward with only one proposal —a nation-wide system of compulsory sickness insurance administered from Washington. The practice of *preventive* medicine is barely recognized by the Wagner-Murray-Dingell Bill.

"One of the chief difficulties arises from the attempts of the Bill to provide a single system of medical care for every portion of the country.

"The standards of living of the people of the United States are generally recognized as the best in the world. No doubt there are areas in which the standards of living are much lower than in other areas. The problem concerned is not, however, how to give *less* of everything to *all* the people but rather how to give more and better of everything to *all* the people.

"Doctors realize that food, fuel, clothing and shelter are even more important in the prevention of disease than immunization or periodical physical examination.

"The tendency to place responsibility for the intimate affairs of his life on the *individual* and to limit responsibility to *local* rather than federal control may well be *fundamental* in the maintenance of the American democracy."

American doctors are unalterably opposed to the establishment of a government-dominated medical system. Typical is the comment of Dr. Edward Cary, former president of the American Medical Association, who declares that: "This country has been drifting away from competitive enterprise, without which the present high standards of American medicine could never have been reached. Socialization of medicine or any other profession would start us backward to the dark ages."

Proponents of socialized medicine cannot expect the very same doctors who now vehemently protest the destruction of their freedom, to don the shackles of legislation such as the Wagner-Murray Bill and con-

tinue to serve with unimpaired efficiency. The doctors have a tradition of freedom behind them just as have the rest of the people. They are used to living in and being part of a society of free men. In proposing to set them apart from this society, they are confronted with an appalling prospect.

We cannot destroy the economic freedom of doctors, any more than we can destroy the freedom of any other group and expect unrestricted medical achievement. This fact might as well be faced. All the laws and bureaucratic decrees in the world will not give the nation first class medical service. Only the doctors can do that; and they can only when there is opportunity for individual progress and achievement.

By the initiative of free enterprise, with Government in the traditional role of umpire, the United States has become a nation of production miracles. History proves there is no other way to achieve real progress. ARE WE TO STEP BACKWARDS NOW?

MEMORIAL ADDRESS*

JAMES Q. GRAVES, M. D.
MONROE

At this time in the proceedings of our society, we pause with bowed heads, to pay tribute to the memory of our distinguished fellow co-workers, who have passed away during the last year, to associate ourselves with those that mourn them, and to give thanks to God, for the noble services they have rendered to their communities and to our profession.

Every man has the right to be judged by his best. It is a wise instinct of the human heart, which prescribes that the good qualities, the virtuous deeds, and the unselfish services, are the things which should be underscored, in those who have departed, this earthly scene. It is as it should be, for in spite of our failures, these nobler aspects of human life are the goals toward which we are striving, it is where we find our deepest satisfaction, it is where we feel truly ourselves.

Our profession, by its nature and tradition, affords great opportunities for worthwhile endeavors. Like we, our colleagues and friends belonged to the great tradition of medicine. That tradition started a long time ago. Through the centuries, tireless and patient efforts have made it what it is. Kings and queens have come and gone; empires have risen and fallen; economics and social systems have had their dawn and their setting; but the great tradition of the art of healing flows on and will flow on. When in any generation a man makes a contribution to it, he has made an investment which will be here as long as humanity endures.

Our departed comrades have brought their share, to this common treasure, and for this, as well as the particular gifts given by their several personalities, we are grateful and we do pay them our tribute.

Their names are as follows:

	Age	*City*
Dix Henry Alverson	63	Shreveport
Rufus E. Applewhite	54	Winnsboro
Adolphe Arthur Aucoin	81	Plattenville
William Franklin Bell	68	Plain Dealing
Hector Emile Bernadas	64	New Orleans
F. V. Boyd	65	Opelousas
A. M. Charlet	74	Belle Alliance
Robert William Cooper	47	Shreveport
Patrick Henry Fleming	53	St. Martinville
L. J. Genella	69	Kenner
Erwin Lowe Gill	42	Shreveport
Frank Theophile Gouax (Past-President)	61	Lockport
Henry Larkin Green	63	Shreveport
Allen Walker Martin	61	Bogalusa
Fred J. Mayer (Past-President)	84	Opelousas
Joseph White Murphey	66	Monroe
M. R. Purnell	74	Shreveport
Thomas Stark	79	Thibodaux
David Frederick Waide	60	Metairie
Clarence John Wichser	53	New Orleans

The curtain has fallen upon the lives of these noble men, their brilliant careers have

*Delivered at the sixty-fifth annual meeting of the Louisiana State Medical Society, April 25, 1944.

come to a close, but, let us not think of this as an hour of parting. It need not be that. It may even be an hour of deeper fellowship during which we can now sympathize more fully with what was wise and generous and lofty in our former colleagues and friends.

How best can we honor them? Surely not by words. Praises will not reach them, nor was it for praises that they lived. They lived for things, the accomplishment of which lies in our hands. We best honor them as we recognize their efforts, as a trust given to us all, and as we accept their labors, as our legacy of duty.

"Life is like a story in volumes of three,
The past, the present, and yet to be,
The first is finished and laid away,
The second we are living day by day,
The third and last of volume three,
Is locked from our sight, God holds the key."

PEACE AND HEALTH*

REGINALD FITZ, M. D.
BOSTON, MASS.

During my medical lifetime I have seen develop what seems something very curious in the medical line. Until 1927, seventeen years ago, there was no particular interest on anyone's part in medical economics or socialized medicine. Then, suddenly, these subjects came to the forefront with a rush and have continued to occupy a prominent position on the medical stage ever since. There must be a background behind such an apparently rapid growth of a large literature and a wide interest in the problems of medical economics, and their complex relations to medical practice, having reached such a conspicuous position as they hold at present and discussed as they are by doctors and laymen alike, easily may modify the future of medicine in this country in a variety of ways.

One of the advantages of studying medical history is that by acquiring a conception of medical trends in the past, one may be able to estimate the significance of current trends at any time, and through attempting to place current trends in their true perspective in the pattern of medicine as a whole, one may be able to predict their probable effect on the future.

There have been left behind entertaining bits of evidence which show that doctors and the public for a long time have been in the habit of working together in order to improve public health, and which suggest quite convincingly that medical progress cannot be made unless, on the one hand, doctors are alert, and on the other, they develop popular support.

More than two hundred years ago, for example, one of my fellow Bostonians, Dr. Zabdiel Boylston, attempted to prevent smallpox by inoculation. He took the public into his confidence as best he could by telling them what was known of the matter in a small pamphlet called "Some Account of What Is Said of Inoculating or Transplanting the Smallpox With Some Remarks Thereon." It is true that he did not achieve any striking success, apparently because so few people believed him; and, indeed, Dr. Benjamin Waterhouse, nearly a hundred years later, found it extremely difficult to convince people that they need not have smallpox unless they wished to. He knew that they could be protected against it by the simple expedient of an artificially produced attack of the cow-pock. But when he told his friends this, he ran into ignorance and superstition and made the wise observation that when a doctor tells the public about anything new in medicine he will encounter three kinds of persons: a small number of imaginative men and women who like to grasp at new ideas and to act on them promptly; a larger number who, on general principles, refuse to accept any innovation of any sort and struggle against change; and finally, a majority who are noncommittal, wishing to wait and see how new schemes develop before they are willing to support or reject them.

Smallpox continued to thrive in Massachusetts for fifty years after vaccination

*Presented as a Commencement Address at Louisiana State University School of Medicine, December 20, 1943.

was described. It was only when enough of the doubtful became sufficiently convinced as to pass a law making the vaccination of school children compulsory that the disease disappeared.

An entertaining book was published in Philadelphia in 1745 by Benjamin Franklin called "An Essay on the West India Dry-Gripes With the Method of Preventing and Curing That Cruel Distemper." Many modern medical students do not realize that West India Dry-Gripes is merely a euphemistic term for lead poisoning. In New England we well knew the clinical manifestations of this disease because the manufacture of rum was so popular. When our customers began to complain that the pleasant habit of imbibing our best New England product, which customarily was distilled through lead pipes, was apt to be followed by a painful stomach-ache or peripheral neuritis, trade fell off and we found it a comparatively simple matter to pass a law forbidding, henceforward, the use of such pipes for distillation purposes. When people discovered, after this law was enforced, that they could again sip their toddies with impunity, everyone was happy and regarded the medical profession in high esteem for their wisdom: the manufacturers, because business improved so rapidly; and the purchasers, because they could now say with jubilation that there was not even an ounce of discomfort in a barrel of their favorite mixture.

Ninety-four years ago, in 1850, a certain Boston schoolmaster, Mr. Lemuel Shattuck, published a book which had a great deal to do with the formation of our state board of health. In this year he wrote "A General Plan for the Promotion of Public and Personal Health." It seemed to him that people ought to be made to take care of themselves whether or not they wished to do so. For he thought that good health was public property. He proposed that the state should enter the practice of preventive medicine by studying public health matters through accurately maintained vital statistics and by carefully controlled research. He advocated medical inspection of school children and periodic examination of apparently healthy people. He realized that a vast amount of ill-health was preventable. He firmly believed that, on the whole, the prevention of disease was more important than its cure.

This book is still well worth reading not only because it is the parent of our present state departments of health but also, which is perhaps more significant, because it was written by a man without any medical training.

These episodes serve to illustrate a long-standing principle. To advance medicine most advantageously doctors and the public must work together. Doctors do not know everything, have no monopoly on health matters, and even if they had, what the public believes of their work deserves consideration. Unless the people carry forward what doctors ask them to do and cooperate with them, but little that is constructive will happen; and conversely, if the people have ideas on anything connected with medicine, doctors must be open-minded and receptive to such ideas as are reasonable and promising.

War may have an unpredictable effect on medical history. During the Spanish-American War nearly one out of every five soldiers who enlisted developed typhoid fever and thus the whole country at once became typhoid conscious. This fact gave a great boom to a variety of public health measures. No one objected to having typhoid fever stamped out, and presently different states began to take into their own hands not only typhoid control but also the control of other infectious diseases by distributing diphtheria antitoxin and vaccine virus or similar products — products that previously had been dispensed through private physicians. Recently someone has suggested that malaria promises to be to the present war what typhoid fever was to the Spanish-American War. If this proves true, we can expect again as comparable an increased infiltration of public health activities into what was originally private practice as followed in the train of the Spanish-American War.

The first World War released dams of many hitherto quiescent currents. A number of doctors learned from their military service what good medical organization means; the relation of modern laboratory methods to diagnosis and treatment; the value of systematic history taking and physical examination; the difference between haphazard and skilled medical or surgical therapy. A certain number returned to civilian life asking themselves whether it might not be possible to conduct civilian medicine on a military-like basis, with a highly organized profession under able leadership working as a unit to bring to the sick and wounded of the community all that is best in advancing knowledge.

The war was eventually followed by a period of economic depression, but this was preceded by one of extraordinary prosperity, when money was made perhaps too easily. In the good times, new and expensively-built hospital plants were established, new laboratories were built, new equipment was manufactured and sold, and good medical care became increasingly more effective and costly. When the depression came there was no longer money available to carry on the great overhead expense that had been set up and the question arose as to what should be done.

It is interesting that medical men first began to worry about the increasing expense of medical care not after the depression had made itself felt but beforehand—in times when business was at its peak. In 1927 a committee was formed to study the costs of medical care and from that date the ramifications of medical economics began to seem like a cinder in the public eye.

This committee soon made preliminary reports of its various investigations but did not complete its work for five years. Then, in 1932, it compiled a summary of its labors in the form of a book called "Medical Care for the American People." This book, like Shattuck's, still deserves careful study.

The members of the committee were not in entire agreement. The majority appeared to be what might be termed medical progressives and believed that a radical reform in medical practice was badly needed. They hoped to see develop soon a form of medical service throughout the country furnished by groups of physicians working as teams, organized around hospitals, and rendering complete home, office and hospital care to their communities. They advocated full extension of all basic public health services and these, of course, should be available to the entire population. They anticipated that to be effective such a method of medical care must be financed on a group payment basis, probably through a combination of voluntary or compulsory insurance and taxation, and that agencies to coordinate and administer such complicated machinery should be established in each state and in every local community.

The minority were more conservative. Their views represented, as one reviewer said, a strong bid to keep things as they were: at all costs to discourage any possible competition by the government in the practice of medicine. They wished to see maintained the dignity of the general practitioner. They opposed the idea that medicine should ever be practiced in any cooperative form. They advocated the cautious exploration of further development of institutions and agencies already in existence without interfering with the time-honored personal element of practice which demands the right of free choice of physician on the part of the patient.

The book was circulated widely and provoked much discussion. How much effect it had on what actually has taken place is difficult to ascertain because there have been so many complicating factors. In any event, a variety of experiments in voluntary health insurance soon commenced, group practices of different kinds sprang up, and even industry began to try its hand at doctoring despite the outspoken dislike for this sort of thing by many physicians.

The last few years have not helped the confusion caused by the first World War: a new war has developed; taxes have increased steadily; the expense of good medical care has not diminished; living costs have risen so that housekeeping bills for

hospitals or medical schools or homes are no less than they were; and institutions which depend in large measure on income from endowment for their upkeep have suffered. So far as hospitals go, two contrivances have been of undoubted help in assisting the ones not under city, state or federal control: voluntary insurance plans like the Blue Cross, and voluntary grant-in-aid as furnished by Community Chests.

No one knows to what extent voluntary efforts can be expanded to ensure the best of medical care to the entire country at reasonable expense. But it is very clear that revenues derived from taxes have risen with unfailing regularity for a number of years and that the share of such increased revenues which have been allocated to improvement of health in one form or another has grown proportionately and, on the whole, has been well spent. As a result, if one defines as state medicine all medical undertakings supported by federal, state, county and municipal funds, everyone will agree that for a long time there has been a steady trend for state medicine to expand, lately perhaps at a faster rate than heretofore because of the various vicissitudes of the past few years. The introduction of a bill before Congress advocating complete governmental control of nearly all medical activities is not an illogical conclusion to all this, though whether the time will ever be right in the United States to have such a bill passed is an entirely different matter.

Young doctors of today will play an important part in shaping the destiny of American medicine for tomorrow. Being privileged to serve their country during a period of national emergency they will acquire new wisdom by virtue of the sacrifices they will be asked to make. Having been ready to run all risks for freedom they will comprehend what freedom means as those of us at home cannot.

As a general rule the graduates of any modern medical school occupy themselves in one of four large fields: they practice medicine, they teach medicine as professional teachers, they investigate disease with the idea of developing new knowledge, or they occupy full-time positions in such branches of medicine as public health or industry. It is likely that those who have served as medical officers in the Army or Navy will look for careers in one of these fields.

Doctors serving in the armed forces are acquiring first-hand knowledge of how a medical practice under government control may operate. Some will become conscious of the effectiveness of a smoothly running, highly organized medical machine and will wish to transfer elements of its complicated structure to civilian life; others will be irked by its impersonality and will wish to return to old-fashioned ways as soon as possible, striving to rebuild the relation between patient and doctor which was so intimate.

Teachers of the future will have observed the end results of the accelerated curriculum. Some will feel that acceleration has lowered standards and that doctors produced too rapidly lack much of the skill and necessary experience or breadth of viewpoint that comes from properly guided study; others will think that the type of medical education that has flourished for so many years is obsolete, that it was unnecessarily long, and that it created too strong a tendency toward premature specialization. All who are interested in the field of education will endeavor to build up postgraduate medical education to the level it should reach, probably by the perfection of short courses such as are now being given successfully at various base and station hospitals all over the world and by elaboration of the prolonged training in medical centers where specialists and teachers will be made.

Those with original minds and a talent for investigation will follow critically the accomplishments of the Office of Scientific Research and Development. For such new medical knowledge as will be forthcoming while the war lasts will be discovered largely through the influence of this office. Some will believe that such an office should continue and that Federal funds, carefully administered, should be set aside for the specific purpose of making new research possible; others will think that it is unwise for the government to continue in medical research, sensing the danger of political entanglements and lack of intellectual independence which is so essential to productivity.

There will be assured opportunities for those interested in public health and industrial medicine. New problems in public health control seem to be enlarging constantly, and the proper feeding of undernourished war-worn peoples, the prevention of tropical diseases and the improvement of international hygiene would seem to promise almost endless opportunities for large numbers of properly qualified doctors. Industrial medicine, too, is developing with astonishing rapidity. The general principle of supplying workmen with medical supervision and of developing methods to prevent loss of time from illness or accident is so sound that it is certain to go forward.

Dr. Benjamin Waterhouse was a keen observer and a shrewd judge of human nature. Human nature has not changed very much since his time. To advance medicine most advantageously doctors and the public must continue to work together. Unless the people carry forward what doctors ask them to do and cooperate with them, but little that is constructive will happen; and conversely, if the people have ideas on anything connected with medicine, doctors must be open-minded and receptive to such ideas as are reasonable and promising. I suspect that as young medical officers return to civilian practice and begin to play their part in helping to determine the future of medicine, as did he, will find that there are three classes of persons: the reformers who will be eager to grasp at new ideas and to act on them promptly; the conservatives who will refuse to accept innovations and will fight strongly against change; and a majority who will wish to see by critical experimentation how new schemes develop before they are willing to adopt them for general use.

After the war, doctors will have a responsibility heavier than ever before in guiding the public most wisely in medical matters. The effect of war on the course of medicine is unpredictable. If the trend towards state medicine continues, the eventual outcome is plain; but, on the other hand, a wave of conservatism may follow and much of what the government now is doing to meet emergencies may revert to private initiative. Therefore, doctors at this particular time must plan judiciously, and act deliberately so as not to mislead the country into errors that would be regretted later.

I hope that, come what may, we will remember our traditions and do nothing to injure our heritage made so noble by generations of men who sought unselfishly to do the best they could to create better health for each succeeding generation of our people. I trust that we will keep in mind the simple, altruistic ideals that such men lived by—Osler, whose first ambition was to make of himself a good practitioner, doing the day's work well and not bothering too much about tomorrow; the Mayos, who believed that the crowning endeavor of a life in medicine was to aid in the development of medical education and research in order always to furnish better physicians and more knowledge with which to reduce illness; Peabody, who knew that the secret of the care of the patient was in caring for the patient. It is only by treasuring, besides old beliefs, the new knowledge and the fresh comprehension of freedom that medicine will acquire through the sacrifices and hazards of war that, as peace comes to the world, with it can come a new era of health.

EPHEDRINE SULFATE IN THE TREATMENT OF NOCTURNAL ENURESIS*

W. E. KITTREDGE, M. D.†
and
HARRY G. BROWN, M. D.†
NEW ORLEANS

The treatment of enuresis in children has always presented a most annoying problem to medical practitioners. The multiplicity of methods suggested for its correction affords ample evidence that none, so far, has proved specific. The disorder is common and most distressing both to the patients' parents as well as to the patients themselves when they reach sufficient age to become conscious of the shame associated with "bed wetting." Ordinarily, nocturnal incontinence is not considered a pathologic condition until the child has passed the age of three, as it is well recognized that it sometimes takes that long for the child to develop the necessary nerve control of the bladder to enable it to sleep through the night without wetting. Until this control has been established, a child's bladder will respond to the stimulus which we know in adults as the first desire to void, wherein the parasympathetic or emptying nerves of the bladder activate the emptying reflex when only a comparatively small amount of urine is present in the bladder. As control is established, children learn to ignore this first impulse, thereby allowing the bladder to fill to full capacity before being further conscious of a desire to urinate. The normal person with normal bladder capacity and no irritating lesion present in the lower urinary tract is therefore continent for a period of eight or more hours at night.

At this point it is necessary to distinguish between functional enuresis and frequency of urination due to organic pathologic conditions. Any pathologic condition which causes a reduction in bladder capacity, loss of sphincteric control with resulting incontinence, retention of urine with resulting overflow or irritation to the bladder itself or to the posterior urethra will cause a frequency of urination which will, of course, result in bed wetting at night. It is obvious, therefore, that before attempting to correct enuresis, all organic causes of frequency must first be eliminated. Should an organic pathologic condition be found, it is reasonable to assume that its correction will eliminate the undue frequency of urination. Diagnostic procedures which should be employed in every case to eliminate organic pathologic conditions include urinalysis particularly with regard to infection, kidney function tests, rectal palpation of the prostate and bladder, estimation of bladder capacity and roentgenograms of the spine to rule out spina bifida. The absence of organic pathologic conditions justifies the assumption that any given case of enuresis is based entirely on an imbalance of nerve control and the treatment should be predicated upon this assumption.

The nerve supply of the bladder involves a highly complex coordination of the sympathetic and parasympathetic nerves as well as voluntary control of the sphincter transmitted through the pudendal nerve. At the risk of over-simplifying the picture, it can be said that the sympathetic nerves are the filling nerves of the bladder in that they inhibit the detrusor muscle which makes up the bladder wall, and cause increased tone in the internal sphincter, thereby allowing the bladder to retain its contents. The parasympathetic nerves, on the other hand, are known as the emptying nerves of the bladder and stimulate the detrusor muscle to contract, simultaneously causing elevation of the trigone and relaxation of the internal sphincter. This is accompanied by voluntary relaxation of the powerful external sphincter by means of its cerebral control through the pudendal nerve.

Based upon these and other considerations, many highly ingenious methods of treatment have so far been suggested in

*Read before the Orleans Parish Medical Society, New Orleans, October 11, 1943.

†From the Section on Urology, Ochsner Clinic, New Orleans.

the management of enuresis. Child psychology has been employed, including threats and promises and the use of sugar pills. Mechanical methods have been used, such as withholding fluid intake in the latter part of each day, elevation of the foot of the bed, the use of collodian plugs in the urethra and high salt intake with the intention of withholding fluids from the urinary tract. Specific drug therapy designed to influence the nerve control of the bladder has included the use of at least 30 drugs, among which is atropine, undoubtedly the best standard drug used for this purpose up to this time. However, it is well known that the results with these and other measures have been indifferent.

Inasmuch as the use of sympathetic nerve stimulants has proved more promising, as exemplified by atropine, than mechanical or psychologic methods of treatment, it would be desirable to find a drug with a more powerful effect upon the sympathetic nerve supply. Ephedrine has been found to produce this effect. This drug was first described in 1925 by Chen,[1] who isolated the compound from a Chinese herb, ma huang. Its pharmacology has been described by many writers, including Learmonth,[2] Winter[3] and others. In its role as a sympathetic stimulant, it activates the internal sphincter and inhibits the detrusor muscle through its stimulation of the presacral nerve. It has been demonstrated that in exstrophy of the bladder, it causes contraction of the trigone, relaxation of the fundus of the bladder and contraction of the ureteral orifices. According to Winter it also causes an increase in the urethral resistance and reduces bladder irritability with resultant increase in capacity.

In 1930 Parkhurst[4] suggested the use of ephedrine in incontinence of urine because he noticed that when given to an asthmatic patient, it caused retention of the urine. In 1932 Balyeat and Rinkel[5] reported a case of an asthmatic patient taking 25 mg. of ephedrine hydrochloride four times a day who had to be catheterized daily and who was unable to urinate spontaneously until thirty-six hours after the cessation of the drug. Again in 1935, Valentine and Fitzgerald[6] reported three cases of acute retention in patients with asthma who took ephedrine. It should be pointed out, however, that in all of these instances, the patients were in the prostatic age group and probably had some inherent difficulty in urination due to early prostatic enlargement upon which was superimposed the neurologic effect of the ephedrine, and that, therefore, young adults and females would not be similarly affected. In 1934 Christopherson and Broadbent[7] used ephedrine to treat enuresis. They reported 12 cases, eight of which were controlled by the use of ephedrine, ¼ gr. daily, and four others which were controlled only by the combination of ephedrine and belladonna.

Our experience with the use of ephedrine in enuresis extends over a period of five years beginning in 1938. We first used it in a public institution for children where one of us in cooperation with the resident physician gave it to 25 chronic "bed wetters." Twenty-three of the 25 immediately became continent and remained so as long as the drug was administered. It was given in a single dose of ¾ gr. each night at bedtime and no other measures were taken to influence these patients' "bed wetting" habit. The drug was continued in each case for two weeks and then withdrawn. It was then noted that enuresis returned in 11 of the 23 cases; the other 12 have remained well. The two who were not influenced at any time were incorrigible children of low mentality. We were greatly encouraged by these results, inasmuch as these children had been treated earlier with many of the accepted methods by other staff physicians with indifferent results. Due to changes in personnel, however, this study was not followed up at this institution.

Since that time we have continued to use ephedrine in practically every case of enuresis which we have encountered both in private and public patients. Each case is first carefully studied to eliminate any organic pathologic conditions which might cause frequency of urination stimulating enuresis. Specifically, it is always neces-

sary to eliminate the possibility of infection in the urine, mechanical obstruction to the emptying of the bladder with resultant retention or any neurologic defect which would interfere with normal function of the bladder. The remaining cases can be classified as true functional enuresis. A single dose of ephedrine sulfate (¾ gr.) at bed time has proved entirely satisfactory and it has been found that larger doses in cases of failure produce no additional benefit. In no instance has there been any unfavorable reaction from the drug. The length of time necessary for a course of treatment has varied somewhat. It is probably always necessary to give it for at least three weeks continuously, after which time it can be withdrawn and the results observed. If the habit returns, the drug can then be resumed for a second course of three weeks. In favorable cases the child ceases to wet the bed almost immediately, although he may miss one or two nights a week for the first two weeks. Once the proper habit has been established, the patient will usually remain continent at night thereafter.

Unfortunately, because of inadequate records it is impossible at this time to report in detail our results in many of these cases. It can be said, however, that in almost every instance, a favorable response was obtained at least as long as the patient took the drug. It should be remembered in this connection that most of these children had been treated by other means without benefit prior to our contact with them. We have often substituted sugar pills for ephedrine in an effort to determine what, if any, psychologic role the mere taking of a drug of any kind has played in these cases. In our experience there has been an almost universal relapse when sugar pills were used. We have noted a few failures which we have been unable to explain. As our experience has increased, we have learned that in some cases prolonged use of the drug either continuously or in separate courses may yield results after a surprisingly long time. One child took ephedrine each night for a month before any improvement was noted, after which time the habit was completely overcome and he has remained well.

A few selected cases are reported in detail in order to illustrate certain phases of this problem.

CASE No. 1

J. D., white male, aged 9 years, was a well developed, healthy and intelligent child. He gave a history of enuresis from infancy; he had wet the bed practically every night and more recently had become greatly chagrined by this habit. He made a conscientious effort to avoid enuresis but was unable to control the bladder while sleeping. He had received varied treatment including belladonna, restriction of fluid intake, sugar pills, and psychotherapy without any noticeable improvement. Urologic studies all were negative. Ephedrine sulfate (¾ gr.) was given each night. During the first week he wet the bed twice, once during the second week and at no time thereafter. He continued taking the drug for 21 days. One month later he wet the bed twice in one week, after which a second course of ephedrine was begun, during which time he never wet the bed. The drug was continued each night for three weeks. He has remained well during the ensuing three years.

Comment: This is a fairly typical case which illustrates what can be accomplished by the use of this drug.

CASE No. 2

C. C., white female, aged 10 years, a well developed and healthy child, gave a history of enuresis from infancy. She had had the usual childhood diseases. Urinalysis revealed no infection. Roentgenograms were normal. Bladder capacity was normal. Rectal dilatation and the instillation of 2 per cent silver nitrate in the urethra had been tried without noticeable benefit. When seen she was still wetting the bed four to five times a week. Ephedrine (3/4 gr.) was given each night. No improvement was noted the first week; the habit had greatly diminished the second week and she had complete control of the bladder by the third week. The drug was continued for a month. The habit returned as soon as the drug was withdrawn. It was, therefore, resumed and she became continent again. A sugar pill was substituted for ephedrine during the second week of her second course and during that week she wet the bed three times. Ephedrine was then continued for a total of a month. Since then she has wet the bed on an average of once a week. No further treatment has been given her as yet.

Comment: This case illustrates the fact that ephedrine can control bladder function as long as it is administered but that a

relapse can occur unless proper habits are established. Evidently this child's bladder has not formed a sufficiently well established habit to allow her to remain continent each night. Further treatment might accomplish this purpose.

CASE No. 3

M. H., white male, aged 3 years, was a healthy looking child who had had no previous illnesses. Enuresis existed from birth. He had not been previously treated. Urinalysis revealed no infection. The prostate was normal on palpation; the bladder capacity was normal and the x-rays of the spine negative. Ephedrine (3/4 gr.) was administered each night for a total of six weeks with no improvement whatever. The drug was discontinued at the end of that time and no additional treatment has been employed as yet.

Comment: This appears to be a healthy, normal intelligent child with no demonstrable organic pathologic condition in the urinary tract who has failed completely to respond to the use of ephedrine. We are unable to explain the reason for this.

CASE No. 4

J. R., white male, aged 23 years, gave a history of having been a "bed wetter" from birth. Many forms of treatment had been tried during childhood without effect, and as he grew up, further efforts were made to cure him. These included the use of drugs such as atropine, prostatic massages, instillations of silver nitrate in the posterior urethra, and other measures. None had any effect and he had become resigned to the inevitability of his condition. He had never been able to accept an invitation to sleep in any one else's home for fear of ruining their mattress. He had recently married and was most embarrassed by his habit of enuresis. Physical examination revealed a normal, healthy male. There was no infection in the urine, the bladder capacity was normal, the prostate negative for infection and roentgenograms of the spine were negative. The blood Wassermann was also negative. Ephedrine (3/4 gr.) was given each night at bed time. He wet the bed the first two nights but never since that time. The drug was continued for three weeks and he has had no relapse in the four years since he was first seen.

Comment: This represents an unusual situation in view of the patient's age, but it also strikingly illustrates the efficacy of ephedrine.

CASE No. 5

D. V., white female, aged 17 years, gave a history of enuresis from infancy. She had always been told that she had chronic kidney disease although it had never been investigated. Little effort had been made to correct her condition. She appeared to be a normal healthy girl, except that she was somewhat obese. Kidney function was normal, urinalysis negative for infection, and bladder capacity normal. Roentgenograms of the spine were negative. X-ray films of the urinary tract were entirely normal. Cystoscopy revealed normal bladder action and sphincteric control. She was given ephedrine (3/4 gr.) each night. During the first week she wet the bed once but never since that time. The drug was continued for three weeks and she has remained cured of the habit during the ensuing six months.

CASE No. 6

E. O., white male, aged 3 1/2 years, was a normal healthy boy with a history of enuresis from infancy. Various efforts had been made to cure him, including psychotherapy, withholding fluids, increased salt intake and the use of belladonna, all to no avail. Examination revealed a normal, healthy child. The urine was negative for infection. Roentgenograms were negative for neurologic lesions. The prostate was normal. Bladder capacity was normal. He was given ephedrine sulfate (3/4 gr.) each night for a month without improvement. At the end of that time the habit suddenly stopped. He took the drug for an additional three weeks and the habit did not return in the ensuing six months.

Comment: In this instance it is difficult to explain why the desired effect was delayed but this case demonstrates the importance of continuing the drug for at least a month, should the patient fail to improve immediately.

SUMMARY

The problem of enuresis in children has been discussed and the methods of treatment so far employed for its correction mentioned. The rationale for the use of sympathetic nerve stimulants has been explained and ephedrine sulfate has been suggested for this purpose. Our experience with the use of this drug is presented and cases are reported to illustrate the various results which have been obtained. The drug is recommended because of its ease of administration, absence of disagreeable reactions and excellent results. A detailed statistical analysis of our series of cases

will be reported at a later date in order to evaluate more exactly the efficiency of ephedrine sulfate in controlling enuresis.

REFERENCES

1. Chen, K. K.: Effect of ephedrine on experimental shock and hemorrhage, J. Pharm. & Exper. Therap., 26:83, 1925.
2. Learmonth, J. R.: Contributions to neurophysiology of the urinary bladder in man, Brain, 54:147, 1931.
3. Winter, I. C.: Pharmacology of micturition. Effect of drugs on bladder and urethra with autonomic supply intact, J. Urol., 46:952, 1941.
4. Parkhurst, L. E.: Nocturnal incontinence in children, (Correspondence), Brit. M. J., 2:1103, 1930.
5. Balyeat, R. M., and Rinkel, H. J.: Urinary retention due to the use of ephedrine, J. A. M. A., 98:1545, 1932.
6. Valentine, J. J., and Fitzgerald, J. S.: Retention of urine due to ephedrine with a discussion of the mode of action and a therapeutic usage, J. Urol., 34:314, 1935.
7. Christopherson, J. B., and Broadbent, Marjorie: Ephedrine and pseudo-ephedrine in asthma, bronchial asthma and enuresis, Brit. M. J., 1:978, 1934.

DISCUSSION

Dr. Roy E. de la Houssaye (New Orleans): I think we all owe Dr. Kittredge a vote of thanks for presenting something that we can all use, something that is practical, something not too scientific for all of us to understand, and also I want to thank him because this is the first time that the speaker has given me his paper to read over a few days ahead of time.

As far as I can make out in going back as far as 1929 on the subject of enuresis, the majority of physicians have come to the conclusion that enuresis is due to an unstable nervous system in the majority of children and even with all the old treatments like pituitrin and atropine, it seems that about 80 per cent get well. There are different treatments. Cook says he believes that in most cases it is purely a habit associated with other habits indicating unstable and highly susceptible nervous systems. Most medical centers now have an enuresis clinic and I might say I think it is a timely place. Dr. Kittredge has given us something else, but I have never used it. There are so many little details associated with the treatment that could be handled in an enuresis clinic. For instance, I might order one drug—Dr. So and So might order another. You might have the child sleep on its side, or raise the foot of the bed—so forth and so on—just to show how many tiny details that have to be brought out in the care of a child with enuresis.

Dr. Kittredge brought out about the psychology of the child. I know he left this open for me. It is not so much the psychology of the child as of the father and the mother. You take this day and time, we see so often a child who must drink a quart of milk a day, six, eight, or ten ounces of orange juice a day, He must do this and he is always being pounced upon to do something. I think if you could get the father and mother and talk things over with them and get the child into a definite routine, that would help, along with the ephedrine sulfate that Dr. Kittredge has so aptly mentioned. In 1942 Gordon, in the British Medical Journal, made studies and brought out quite a few cases of patients who had asthma where ephedrine was used and they had difficulty in urinating. It seems there is a definite association between enuresis, stammering, and asthma. There is a neurological background in asthma—allergy.

One thing—most of us do not have sufficient urological examinations. Just because a child comes in with enuresis is no reason to send him to a urologist. We should check him up and, if he presents a problem and we have done everything we can, that child should definitely have a urological examination. I am guilty of not having as many urological examinations on as many of these children as I should have. We should certainly take that into consideration. You can restrict fluids, use a high protein diet. I have had excellent results with that and probably if I had used ephedrine would have even better. Give them eggs, beans, peas, salt herring—a protein diet—and restrict cereals and fruits.

Dr. Kittredge said that the early methods were treated with indifferent results. I think a great deal of these indifferent results are principally the indifference of the physician. We do not set out a very definite program for the family to follow in the treatment of enuresis. If we were to have a mimeographed sheet of instructions—if we have something definite and tangible—I think we would get better results. Most of them have been pretty good. I want to say that there is one doctor who used ephedrine in 1937. Brookfield reported 30 cases of enuresis treated with ephedrine sulfate. Ten were cured, an improvement noted in 14, and the rest of them were rather indifferent and did not get along well.

I have found in using ephedrine sulfate that in children it makes them highly nervous. If 3/8 of a grain of ephedrine sulfate is given to a three or four year old child he gets quite jittery if you do not give some sedation along with it. It is so easy to administer that I hope to use it.

Dr. Henry D. Ogden (New Orleans): I am certain this method of treatment is going to be helpful. Epinephrine has also been used in the past. Both drugs are sympathicometic in action, ephedrine being usually longer in duration. I would like to give a little light on some of these functional cases that Dr. Kittredge has mentioned. Remembering that the allergic mechanism consists primarily of an overstimulation of the parasympathetic nervous system, studies from the standpoint of sensitization were made by Bray in 1934. Three types of enuresis are found in association with allergy.

First—enuresis definitely associated with an outstanding allergic disorder such as asthma, hay fever, or dermatitis. He was able to give relief

by proper diagnosis and avoidance of the offending allergen.

In the second group typical allergic manifestations are not present, but certain relationships indicate the assumption that the cases are of allergic origin. For instance, the enuresis may only appear during a certain pollen season, or when there is an upper respiratory infection with bacterial allergy.

The third group is that group of cases in which enuresis apparently exists with no other allergic symptom or relationship, and the diagnosis is only made by skin tests and careful study.

Therefore the suggestion should be made that in some of these functional cases such a disturbance of the parasympathetic system might be due to an allergy. Ephedrine would tend to counteract these allergic reactions. I would like to ask Dr. Kittredge if he noticed allergic manifestations in any of the children treated by him.

Dr. Clyde Brooks (New Orleans): I want to point out the pharmacologic status of ephedrine. Ephedrine is effective in the cure of enuresis. In those cases which do not respond to ephedrine, some other similar drug might be tried. They all act similarly on sympathetic and parasympathetic nervous systems.

Dr. Philip M. Tiller (New Orleans): Do you give the same quantity to a three-year-old as you do to a 23-year-old person?

Dr. Kittredge (in closing): The question has been asked as to whether any adverse reactions have occurred in our experience with the use of ephedrine in enuresis. I want to say that we anticipated that at least some of these patients would have nervousness and wakefulness as a disagreeable side-effect of the use of ephedrine. We warned the mothers of this possibility. So far, none have complained.

In connection with wakefulness, I might add that at one time we also tried benzedrine sulfate on the theory that this drug would cause some wakefulness and lightness of sleeping thereby enabling these children to be aware of a full bladder so that they might go to the bathroom during the night and not urinate in bed. In our hands this did not prove of any value, although the drug itself did cause some nervousness, and fretfulness.

As far as dosage is concerned, we started using ephedrine in doses of 3/8 grain, particularly in the smaller and younger children, reserving the ¾ grain dose for only the larger children. Later on we began using 3/4 grain on all the children, regardless of age and having had no adverse reaction to this, we have continued to use it on all patients.

As regards the case of the 23-year-old man, I wish to point out that this patient had daytime frequency as well as enuresis and that at the onset of his treatment we gave him ephedrine 3/4 grain three times a day with the intention of reducing his day frequency, as well as his enuresis. He improved so rapidly that soon we left off the daytime doses and instructed him only to take the single dose at night and he had no further trouble.

ADENOMYOMA OF THE GALLBLADDER

(CASE REPORT OF MULTIPLE PAPILLARY ADENOMYOMA IN A 15 YEAR OLD BOY)

GORDON McHARDY, M. D.†
AND
DONOVAN BROWNE, M. D.†
New Orleans

Benign neoplasia of the gallbladder, statistically, is less frequent than primary malignancy of this structure; the rarity of the latter is readily accepted. This statement in its entirety, however, demands the further support of proper classification of benign tumors with the elimination of the pseudo-neoplasms for its confirmatory justification. Papillomas are found in approximately 8 per cent of surgically removed gallbladders. Their occurrence is deemed unimportant and with exclusion from the true neoplasias, the situation changes and benign tumors represent only .07 per cent as illustrated in Wellbrock's[1] study. McCarty,[2] Phillips,[3] and Graham[4] with his associates, in agreement, consider papillomas merely hypertrophied villi related to cholecystic disease, the result of inflammatory change, cholesterosis or a combination of the two, and therefore are not properly neoplasia.

Differentiation has been suggested but not specified; even distinguished pathologic texts on neoplasia offer no classification. From the work of others we offer this compilation:

Benign Tumors

1. True neoplasia which may be single or multiple, cystic, papillary, and semi-solid

†From the Department of Medicine, Tulane University School of Medicine, and the Gastroenterology Clinic of Touro Infirmary, New Orleans, Louisiana.

a. Myoma
b. Fibroma
c. Lipoma
d. Myxoma
e. Neurofibroma
f. Amputation neuroma
g. Adenomyoma
h. Other mixed tumors

2. Pseudo-Neoplasms
a. Intramural calculosis
b. Papillomas "cholecystitis catarrhalis papillomatosa"

Adenomyoma, a mixed tumor, has excited considerable publication and has been reported under various descriptive terms. Robson[5] and Wellbrock[1] termed it adenoma, Hromeda[6] preferred myoma, King and MacCallum[7] coined cholecystitis glandularis proliferan, Kordenat[8] and Shambaugh[9] described it cystadenoma, to mention only some contributors. The more acceptable title, adenomyoma, was offered by Nicod[10] and by Eiserth;[11] this is the most accurately descriptive designation for the apparent reasons enumerated by Shepard[12] and his associates.

The incidence of adenomyomas varies from the minimal report of two in 4500 consecutive necropsy studies by Russo and Angrist[13] to the 9.5 per cent of King and MacCallum[7] in a study of surgical pathology. Shepard[12] and his associates at Mayo Clinic found an incidence of one in every one hundred cases of cholecystectomy. There is no apparent sexual relationship, although the Mayo Clinic study showed 75 per cent in females. The average age approximates the fifth decade with variations from 22 to 70 years of age reported. We could find no case report of occurrence in adolescence or infancy despite Nicod's[10] statement they are found "at almost all ages."

Etiologically the hypotheses vary from congenital origin, through inflammation and infection in the gallbladder, to the trauma of cholelithiasis. Much has been stated on each aspect of the issue. Abell,[14] and Kordenot,[8] Ribbert,[15] and others favored the congenital source as exemplified by Cohnheim's theories; there are many other explanations lacking any greater substantiation. King and MacCallum[7] are among those favoring metaplasia resulting from inflammatory or other stimulation.

Adenomyomas as we know them best are those of the uterus; at this site they represent the usual structure of the muscle tissue containing glandular alveoli. The development of the glandular element varies from a few isolated acini to large epithelial lined cystic tumors and may predominate over the muscular elements to form polypoid processes. This description is closely applicable to the occurrence of adenomyoma of the gallbladder and justify the subclassification into single, multiple, cystic, papillary, and semi-solid depending on the degree of preponderance of one of the two component elements. This aspect has been overlooked by many authors who limit their description to solitary cystic adenomyomas.

Symptomatically these lesions are silent. It is conceivable that they might by themselves or by virtue of concomitant cholecystic disease cause biliary manifestations suggestive of chronic cholecystitis with or without cholelithiasis.

Diagnostically there is the academically remarkable roentgenologic accomplishment of Kirklin[16] in diagnosing 51 cases on cholecystography. The finding of increased dye concentration by Caylor and Bollman[7] is considered significant. It is, therefore, more than conceivable from the work of Kirklin,[16] Hefke,[18] and Moore[19] that a presurgical diagnosis is possible by an unusually suspicious roentgenologist. Kirklin,[16] Caylor and Bollman,[17] and Shepard[12] have evaluated the findings:

1. A more radiolucent defect in the dye filled gallbladder than with a calculus.

2. A small marginal defect best seen in tangenital views and in a twenty-four hour film.

3. The defect is usually single. When multiple they are discrete.

4. The involved gallbladder may be a better dye concentrator resulting in a denser than normal gallbladder shadow.

Most diagnoses, of course, are achievable only by pathologic study of the gallbladder

removed because of definite manifestations of biliary disease.

Complications include intramural abscesses which may rupture into the peritoneal cavity and produce peritonitis. Concretions in the cysts may conceivably result in intramural calculosis. Cystic duct obstruction is a possibility. That a separated portion of a tumor may serve as a nidus for a stone is a long lived theory. Malignant potentiality is possible.

The treatment is obviously surgical.

COMMENT

It is pertinent in this case report that the age of the patient, 15 years, with the history justifying the assumption that the pathology existed at the age of 8 years, renders this incident the more unusual. The papillary type of adenomyoma and multiplicity both magnify the rarity of the lesion. It may be suggested that the disregard for the possibility of cholecystic disease in youth may be responsible for incurable pathology in adults admonishing us adequately to explain biliary symptoms in youthful patients.

CASE REPORT

F. L., a 15 year old student, was admitted to Touro Infirmary on February 18, 1943, with localized biliary pain of seven years' duration, with its onset coincident with an episode diagnosed as acute appendicitis. An appendectomy was done. The surgeon reported the appendix adhered in an inflammatory mass occupying the subhepatic region and attached to the gallbladder. The gallbladder was palpably firm, suggesting cholelithiasis to the explorer's fingers. Postoperatively the patient was icteric. Intermittently over the period of seven years there were episodes suggestive of biliary colic with nausea and vomiting and periods of disability of seven to ten days' duration. There was no further jaundice. The history was otherwise irrelevant.

Physical examination revealed an asthenic, anemic adolescent male in whom a bradycardia and and apparently functional systolic mitral murmur were incidental findings. There was localized acute biliary tenderness with a sharp palpably firm hepatic margin.

The only significant laboratory finding was a hypochromic, microcytic anemia.

Roentgenologic study revealed normal findings on a G. I. series. Cholecystography failed to reveal any evidence of cholecystic function.

Peritoneoscopy was inconclusive. There were dense adhesions in the right upper quadrant of the peritoneal cavity which partially nullified the value of the procedure. The liver appeared normal. A small, white, apparently rigid, gallbladder was seen. Palpation through the instrument gave the sensation of solidity.

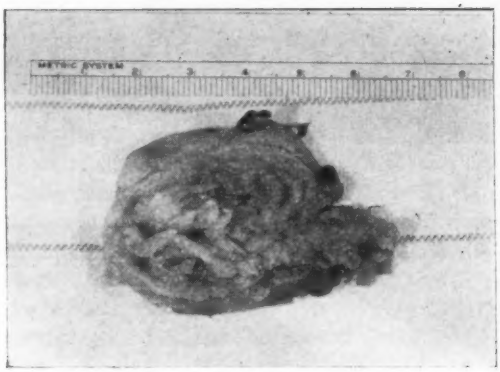


FIGURE 1

Photomicograph revealing the typical papillary type of adenomyoma with cystic changes.

Surgical intervention was elected. Dr. J. D. Rives, on exploratory operation, released dense adhesions to enter the biliary region, dissecting free a contracted, white, firm gallbladder. There were no demonstrable calculi. The common duct was greatly distended with bile. After aspiration

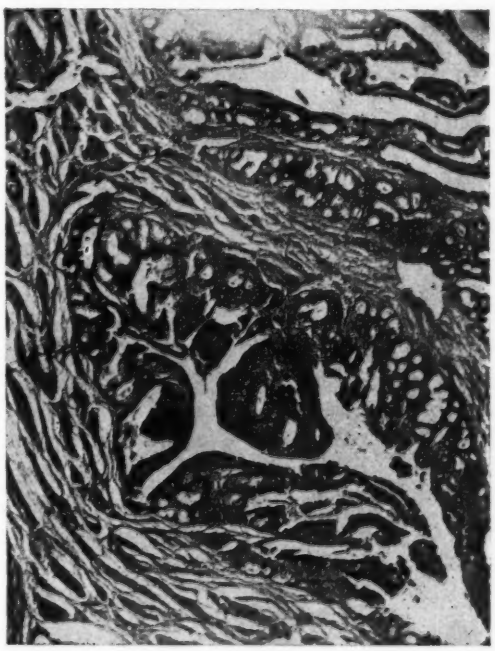


FIGURE 2

The gross specimen showing the lumen a complete mass of papillary growths.

the common duct was explored; no calculi were found and bougies were passed through into the duodenum without difficulty. A cholecystectomy was performed.

The gross specimen showed a pinkish-grey serosal surface with a smooth, glistening, firm area at the fundus measuring 1.5 cm. in diameter. The wall was 6 mm. thick. The mucosal surface was rough, pinkish-red and was covered in its entirety by papillary projections as seen in the illustration. One large nodular mass 2 cm. x 1 cm. represented the area viewed externally; this was studded with small grayish nodules 3 mm. in diameter. (Fig. 1).

The microscopic findings were those of papillary adenomyoma. (Fig. 2).

SUMMARY

1. A brief summarization of our knowledge on primary benign cholecystic neoplasms is presented.

2. Adenomyoma of the gallbladder are discussed.

3. An unusual incident of multiple papillary adenomyoma of the gallbladder is reported.

REFERENCES

1. Wellbrock, W. L. A.: The occurrence and possible significance of adenoma of the gallbladder, Am. J. Surg., 23:358, 1934.

2. McCarty, W. C.: Diseases of the Gall Bladder and Bile Ducts, W. B. Saunders Co., Philadelphia, pp. 77-94, 1940.

3. Phillips, J. R.: Papilloma of the gallbladder, Am. J. Surg., 21:38, 1933.

4. Graham, E. A. et al.: Diseases of the Gall Bladder and Bile Ducts, Lea and Febiger, Philadelphia, pp. 184-190, 1928.

5. Robson, A. W. M.: Adenoma of the gallbladder, Med. Chir. Tr., London, 88:229, 1905.

6. Hromeda cited by Shepard (12).

7. King, E. S. J., and MacCallum, P.: Cholecystitis glandulous proliferan, Brit. J. Surg., 19:310, 1931.

8. Kordenat, R. A.: Cystadenoma of the gallbladder, Wisconsin M. J., 29:634, 1930.

9. Shambaugh, P.: Multilocular papillary cystadenoma of the gallbladder, Am. J. Surg., 22:229, 1933.

10. Nicod, J. cited by Shepard (12).

11. Eiserth, P. cited by Shepard (12).

12. Shepard, V. D., Walters, W., Dockerty, M. B.: Benign neoplasms of the gallbladder, Arch. Surg., 45:1, 1942.

13. Russo, C., and Angrist, A.: Five years of gallbladder disease in a general hospital, Am. J. Surg., 58:398, 1942.

14. Abell, I.: Papilloma and adenoma of gallbladder, Ann. Surg., 77:276, 1923.

15. Ribbert cited by Kordenat (8).

16. Kirklin, B. R.: Cholecystographic diagnosis of neoplasms of the gallbladder, Am. J. Roentgenol., 29:, 1938.

17. Caylor, H. D., and Bollman, J. L.: The bilirubin of gallbladder bile in cholecystic disease, Arch. Path. & Lab. Med., 3:993, 1927.

18. Helke, H. W. cited by Shepard (12).

19. Moore, C.: Cholecystographic diagnosis of papillomas and tumors of gallbladder, Am. J. Roentgenol., 33:630, 1935.

THE INCIDENCE OF PEPTIC ULCER*

MARCEL PATTERSON, M. D.
SAN FRANCISCO, CAL.

Anyone who lives in America and listens to his radio or reads the current advertisements, or even the roadside signs, must certainly be well aware of the fact that dyspepsia is one of the most common complaints of our countrymen; nor is this a problem limited to these shores, for in a recent British publication, the statement was made that a firm of retail chemists who owned about a dozen shops in an industrial area sells a half ton of alkaline powders to their customers per month.[12] Yet when one attempts to analyze the data of various authors on the incidence of the different causes of dyspepsia, particularly peptic ulcers, one is struck with the extreme lack of agreement. This observation has been made by several reviewers and the explanation is given that geographic conditions and lack of uniformity of method used in conducting such surveys are two important factors in these discrepancies.[26a] It has been said that one can prove anything with statistics and in a problem such as peptic ulcer where the etiology is as much an unsettled problem as malignancy, it is not surprising to find that many authors, in an attempt to add evidence to their pet idea, have added to the general confusion by refusing to compare their findings with controls or overlooking embarrassing comparisons.

Regardless of the fact that the question of incidence is very unsettled, the importance of peptic ulcer is no less belittled. One of the most striking statements ever

*It is to be regretted that on account of the length of this paper it was necessary to delete six valuable and well prepared charts.

made in regard to its importance is that by Smithie in May of 1928. He said, speaking before a group of clinicians, ". . . Assuming that in the United States at present there are sixty million individuals at or past adolescence, two million two hundred thousand of them now harbor or at some time will be affected with peptic ulcer. If all of these are treated surgically, there will be an operative mortality of 7 per cent (154,000 will die from operation). Of those with only one operation there will remain a digestive morbidity in 39 per cent, or 579,000. Following successful (?) surgery, 46,000 will come to at least one second operation."[81]

In considering what should be acceptable as statistical data it becomes necessary to review briefly the history of the recognition of peptic ulcer. Most writers give Cruveilhier credit for first establishing the anatomic characteristics, complications, and clinical features of chronic ulcer, but Hurst states that in 1828 John Abercrombie of Edinburgh gave a splendid account of the symptoms of gastric ulcer and this preceded Cruveilhier's work by several years. It was almost forty years later that Krause, in 1865, presented the first complete discussion of duodenal ulcer.[15] It appears that Krause's work was almost totally forgotten for in the early days of the twentieth century it was still universally taught that duodenal ulcer was a rare condition and most writers limited their observation to gastric ulcers, considering them twenty times as frequent as duodenal. In 1901 and 1905 when Moynihan published the results of his surgical experiences, interest again became lively, and at the same time the direct objective method of roentgen ray and gastroscopy was going through the process of development.[38] Haudek, in 1910, described the niche of gastric ulcer, and Cole in 1914 clearly established the significance of the deformity and the crater of duodenal ulcer. The classic book by Carman and Miller on "The Roentgen Diagnosis of Diseases of the Alimentary Canal," appeared in 1917, but nevertheless was not widely used. In the past two and a half decades an amazing transformation has occurred. Gastrointestinal roentgen ray examination, particularly the mucosal relief technic under the influence of Abbeelund (1921) and Berg (1930), has been perfected to such a degree that now even very small ulcer craters may be demonstrated with an amazingly high degree of accuracy and with a frequency undreamed of in the years before the first World War. Modern gastroscopy was developed and perfected during this period by Schindler, using first the rigid gastroscope and later, in 1932, devising the flexible instrument now in use. And so today the diagnosis of gastroduodenal disease can be made by rather precise objective methods, whereas the observers in the last century and the early part of the present one had to rely on clinical deduction.[57] Consequently it must seem obvious that when one considers the incidence of ulcers in the early twentieth and late nineteenth century based on clinical impressions, the results are naturally inaccurate, while the discrepancies based on autopsy figures may be explained perhaps by the fact that pathologists were not "duodenum conscious" or that there actually has been a change in the essential pathology of peptic ulcer. The former seems more likely to me.

FREQUENCY OF PEPTIC ULCER

To give some idea of the significance of geographic distribution and also to indicate the problem that one faces in determining the incidence of peptic ulcer the following statistics are given. They are taken from two articles, one which appeared in the Archives of Internal Medicine in 1926, written by Sturtevant and Shapiro, [70] and the other by Gordon and Manning which appeared in the American Journal of Medical Science in 1941.[26a] (See table 1.)

A quick glance at the percentages in table 1 will reveal that there is a range from 0.5 per cent to 20 per cent and consequently little or nothing can be estimated in regard to the incidence of peptic ulcer. If we ignore all statistics prior to 1913, limiting ourselves to the United States alone, we are

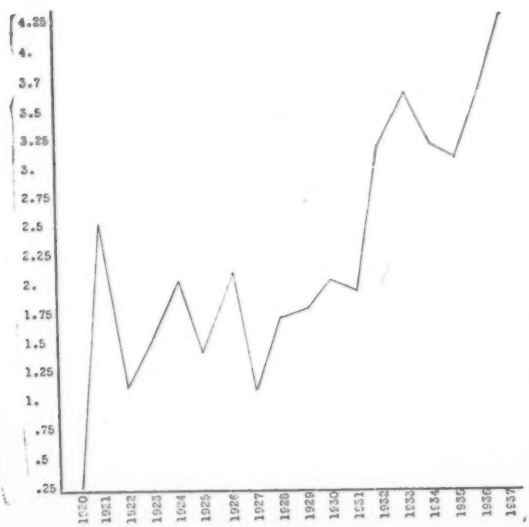
TABLE 1

Author	Year	Place	No. Cases	Percentage Ulcers
Von Jahsch	1855			4.8
Brinton	1859	London		5.00
Leuke	1871	Germany	13,605	4.80
Ziemssen	1871	Leipzig		4.55
Lebert	1876	Germany	200	.5
Grunfeld	1882	Europe		20.00
Berthold	1883	Germany		2.7
Welch	1894	U.S.A.	32,052	5.00
Nolte	1900	Germany		1.25
Fenwick	1900	U.S.A.	47,912	4.2
Riegel	1905			20.00
Dreschfeld	1907	Baltimore	1,000	5.00
Stahl	1907	Germany		2.16
Dietrich	1912			1.5
Lockwood	1913	U.S.A.	19,315	1.23
Bassler	1926	U.S.A.	59,450	4.4
Sturtevant and Shapiro	1926	N. Y. City	7,700	2.11
Muller	1934	U.S.A.		2.11
Portis and Jaffé	1937	Chicago		4.90
Gordon and Manning	1941	Philadelphia	22,956	3.10

still faced with a variation from 1.23 per cent to the high incidence of 4.9 per cent in Chicago. Therefore to alleviate confusion and to attempt to get some definite ideas about what one might expect in various parts of the world, the attempt will be made to discuss incidence as it occurs in various countries. In some instances it was not feasible, or was impossible, to obtain statistics, and personal opinions based upon clinical experience had to be relied upon rather than autopsy or proved clinical diagnostic material.

CHART 1
PERCENTAGE OF TOTAL AUTOPSIES

Percentage of Ulcer Cases Found in Autopsies Performed at Philadelphia General Hospital from 1920-1937 (Gordon and Manning).



AMERICA

"There seems little doubt that digestive disturbances, particularly those due to peptic ulcer, have increased enormously during the past 20 years." This statement was made by Graham and Kerr[26b] in the British Medical Journal in March of last year. The evidence of this being true in England is not as marked as in America, but at least in two places in this country, New York and Philadelphia, the evidence is rather striking (chart 1). Hinton in 1933, reviewing the protocols and case histories at the Bellevue Hospital in New York City from 1910 to 1931 found, though there were yearly fluctuations, that there had been a gradual rise from 0.09 per cent to 0.66 per cent of the total admissions with a diagnosis of peptic ulcer. It is interesting to note that the barium meal for gastrointestinal study was introduced in Bellevue Hospital by Hirsh in 1910. This author also showed that the incidence of perforation and hemorrhage increased proportionately so that it is convincing that this rise is actual rather than relative.[33]

Gordon and Manning, in reviewing protocols at the Philadelphia General Hospital, found that from 1921 to 1937 there had been a rise from 2.35 per cent to 4.15 per cent of total autopsy material that showed some evidence of peptic ulceration[26a] (see chart 1). Examination of the two statistical studies reveals rather marked differences in yearly variations, yet both show that peptic ulcer is apparently on the increase. It is unfair to say that one man's results are inaccurate because they do not compare with another favorably, for it must be again emphasized that Hinton was working with patients who had been diagnosed clinically, and it must be remembered that many patients suffer with ulcer who do not consider their symptoms severe enough to bring them to a doctor.[23]

DeBakey and Odom, in a study of admissions in Charity Hospital at New Orleans from 1929 to 1938, found an increase from 0.0444 per cent per 100,000 admissions to

0.0614 per cent per 100,000 admissions, that is to say an increase in incidence one and a half times while the incidence of perforation increased approximately seven times.[55]

In table 2 it will be noted that the various incidence of peptic ulcer as found by different observers in America is given. Only the more recent observations are considered, since we are primarily interested in the incidence of ulcer as we expect to find it today, and from the previous discussion it may be well assumed that ulcer is more common in this country than in previous years.

I have attempted to arrange these statistics according to the type of material the author was using, that is to say, autopsy, roentgen ray, or per cent of general admissions. It seems only obvious that the investigator who quotes findings on the number of ulcers he has found according to the number of gastrointestinal roentgen ray studies he has made will have a higher percentage of occurrence than the man who quotes statistics on numbers of cases per general admissions. We must certainly assume that if the trouble were taken to run a gastrointestinal series on a patient, that he had either a complaint of dyspepsia or the examiner felt that it was indicated. It is also common clinical experience that every patient admitted to a general hospital with dyspepsia as an incidental finding, is not examined for ulcer. A consideration of these factors will help to clarify some of the apparent discrepancies among reporters.

Classifying the statistics in table 2 into three groups, it is found that among 41,827 cases examined at autopsy, there was an average incidence of 5.5 per cent peptic ulcerations. The high incidence found by Robertson and Hargis might be explained by the fact that these men were making an anatomic study and were particularly care-

TABLE 2

AUTHOR	TYPE	CASES	NO. YEARS	PERCENTAGE ULCERS	PLACE
Portis & Jaffé	Autopsy	9,171	1929-36	5.	Cook Co. Hospital Chicago
Robertson & Hargis	Autopsy	2,000	1925	11.85 (duodenal)	
Gordon & Manning	Autopsy	22,956	1941	3.10	Philadelphia Genl. Hospital
Sturtevant & Shapiro	Autopsy	7,700	1926	2.1	Bellevue, N. Y.
Dwyer & Blackford	X-ray	3,000	1930	15.	?
Eusterman & Balfour	Roentgen ray	15,985	1935	13.2	Mayo Clinic
McMullen	Roentgen ray	4,400	1941	20.	Colorado Genl. Hospital, Denver
Muller	Clinical	176,000 Genl. Adm.	1934	.94	Henry Ford Hospital
Boland	Clinical	135,000 Genl. Adm.	1925-34	.68	Grady Hospital Atlanta
Steigman	Clinical	67,831 Genl. Adm.	1934	.88	Cook Co. Hospital Chicago
Blackford & Cole	Clinical	?	1939	1.5	Seattle
Odom & DeBakey	Clinical	100,000 Genl. Adm.	1938	.06	Charity Hospital New Orleans
Hinton	Clinical	48,293 Genl. Adm.	1926	.54	Bellevue, N. Y.
	Clinical	63,837 Genl. Adm.	1936	.66	Bellevue, N. Y.
Jennison	Clinical	14,000 Group of Employees	1927-36	1.4	Metropolitan Life Ins. Co.

ful in looking for, not only active lesions, but healed scars which they added to their series. It is interesting to note that in those patients with duodenal scars only 38 per cent had been diagnosed as ulcer patients and 62 per cent had few or no symptoms. This will perhaps explain the low average percentage of 0.73 incidence of peptic ulcer among general admissions. I am unable to explain the low percentage of peptic ulcers as given by Odom and DeBakey at Charity Hospital, New Orleans. Among 20,385 patients examined roentgenologically there is an average incidence of 16 per cent, and according to Drossner and Miller the roentgen ray diagnosis in 80 proved cases of ulcer was 92 per cent correct.[20] Assuming that this statement is universally correct, which is doubtful because one must depend upon variously trained radiologists and clinicians, the incidence of peptic ulcer in this group would be 18 per cent, probably higher.

From this maze of statistics there are certain conclusions which seem to me to be forthcoming. The first is that apparently only a very small percentage of patients admitted to hospitals in America with a peptic ulcer are diagnosed as such. There may be several reasons for this. Peptic ulcers, particularly duodenal ulcers, are notorious for their chronicity and their ability to wax and wane as far as symptoms go. From Robertson and Hargis' findings[63b] and from other clinicians' opinions,[38] we must assume that many ulcers do not give any symptoms or else heal before the patient has considered it important enough to go to the doctor. This is especially true of the acute ulcers. Secondly, that among those patients for whom roentgen examination of the stomach and duodenum appeared necessary the incidence is rather high; and thirdly, that the incidence of peptic ulcer in America is extremely variable, depending upon what year the statistics were taken, what part of the country they are from, and what method was used by the author in his report. Perhaps when Palmer, speaking at the Ninety-third Annual Session of the American Medican Association, made the statement that studies indicate that peptic ulcer occurs at some time in at least 12 per cent of all adults, he came as close to the actual incidence of peptic ulcer in America as anyone ever has.[57]

GREAT BRITAIN

Before World War I, Rutimeyer, in writing a paper on the geographic distribution of peptic ulcer in necropsy material in various countries, stated that in England the incidence was 5 per cent.[60b] The same figure is quoted by Kemp[41] in his book, "Diseases of the Stomach" published in 1910, and by Brinton[10] in 1865. One of the most thorough and more recent studies is that done by Hurst and Stewart[38] when in a study of some 4,000 consecutive autopsies done at Leeds General Infirmary prior to 1935, they found an incidence of 9.55 per cent of peptic ulcer and came to the conclusion "that it may therefore be assumed that about 10 per cent of all individuals suffer at some time in their life from a chronic gastric or duodenal ulcer." McCrae, in an article appearing in 1938, gives the incidence of peptic ulcer in London as 4.2 per cent, but his statistics are low in regard to the United States which he gives as 1.2 per cent.[32]

It would appear therefore that the incidence of peptic ulcer as far as America and England are concerned is much the same.

EUROPE

According to Rutimeyer the geographic incidence of peptic ulcer in necropsy material in Europe is as follows: 4 per cent in Austria, Bohemia, and Poland; 16.7 per cent in Denmark; 5 per cent in Germany; .8 per cent in Russia; and 2.6 per cent in Switzerland. This work appeared in 1906[60b]

Hart (1918) and his assistants, Musa and Holzweissig (1922), investigating cases in Germany in a seven-year period preceding 1921, found after thoroughly examining the stomach and duodenum for ulcers and scars, an incidence of 6.1 per cent of peptic ulcer among 3,058 autopsies.[38] Friedenwald,[32] reporting in 1926, stated that the incidence of gastric ulcer in Central Europe is 0.54 per cent to 3 per cent.

A statistical study from the University of Mauberg in August, 1940, revealed that out of 5,048 patients who came to the clinic complaining of dyspepsia, roentgenographic study revealed an incidence of 24.8 per cent.[80] But Hans May remarked after travelling in Europe, "There is a difference in the behavior of peptic ulcer in various countries. While in Frieburg-in-Baden the number of patients treated at the University Hospital for peptic ulcer was comparatively low, yet the number of such patients admitted to the University Hospital at Munich (200 miles away) was strikingly high, nearly ten times higher than in Frieburg. I have observed that in Philadelphia with the exception of perforation, the incidence is as high as in Munich. . . ."

In regard to the rest of Europe one finds a large number of variable incidences. Professor Donati, University of Turin, Italy, found ulcer lesions in only 2.22 per cent of his autopsy material. Keen's surgery states that in 6,000 postmortems in St. Petersburg only two cases were noted for peptic ulcer. In Marion Magdalen Hospital, St. Petersburg, with a yearly admission of 3,500 not a single case of peptic ulcer was seen. Hamperal found in a study of peptic ulcer in Russia before 1918 an incidence ranging from 0.5 to 1 per cent.[52] In the literature reviewed for this paper, not a single reference to the incidence of peptic ulcer in France was found though no attempt was made to read any of the French literature. It seems strange that, considering the number of articles that have been written on geographic distribution of ulcer, that no reference is made to France, Spain, or the Scandinavian countries.

Muller[52] concluded at the end of his paper on geographic distribution of ulcer that "the incidence of peptic ulcer lesions varies not only from country to country but may vary in the same locality" and this discussion in regard to the incidence of peptic ulcer in Europe is merely a gesture to give some idea of the variability. Many attempts have been made to explain this but so far it has remained as much an enigma as it was to Ewald[24] in 1902 when he advocated the possibility that in those places where ulcer was rare, the inhabitants were vegetarians and due to the increased potassium in the diet, were immune to the ulcer.

INDIA

Major E. Hingston, I.M.S. in 1927 expressed the belief that peptic ulcers are most common in southern India, less common in Bengal and least common in the region adjacent to the foothills of the Himalayas. Recently (1940) there has appeared in the Indian Journal of Medical Research, a series of articles on peptic ulcer in India. They were the results of a study of statistics from 5,674 hospitals all over India, and the conclusion was that disease of the stomach and duodenum are common in India, constituting 2 to 4 per cent of the total attendance at the hospitals and dispensaries. 1939 figures which included all sources showed an incidence of 690 to 3,320 per 100,000 population. It was Hingston's opinion that peptic ulcer is fifteen times more common in southern than in northern India and he believed that this was due to the high carbohydrate and low protein diet eaten by the southern Indian.[17] Many authors agree that gastric carcinoma is rare in Indian hospitals.[52,61]

CHINA

Professor D. S. Robertson, Mukden Medical College (1929), after making an extensive survey, came to the conclusion that ulcer was not only common in China but also in Korea, Formosa, and in fact, all over the Far East. He commented on the superficiality of the lesions, lesions which heal kindly under medical regime and seldom require surgical intervention.[52]

NETHERLAND EAST INDIES

The striking difference in frequency of peptic ulcer and gastric carcinoma between the Malays (natives) and the Chinese in Java and Sumatra is known and confirmed by every pathologist of the Netherland East Indies. In the Malay race the incidence is extremely low whereas among the Chinese living in towns and villages of these islands the frequency is more or less the same as in the Western world. For example, in a

study of 951 autopsies among the Chinese, there was an average incidence of 2.26 per cent of peptic ulcer, while in the Javanese, 2,512 autopsies were performed with an incidence of 0.4 per cent.[7] Further examples of this variation among the various races is shown by the work of Kouwenaar in 1930 at the rubber plantation of Deli in Java. In 2,173 autopsies he found among the Chinese an incidence of 10.10 per cent; among the Klingen (Indian coolies) an incidence of 5.6 per cent; and among the Javanese an incidence of 0.97 per cent.[52]

MEXICO

A study of mortality statistics by Frederich L. Hoffmann of the Prudential Life Insurance Co. revealed that peptic ulcer was not a prevalent disease in Mexico. His statistics were taken from the states of Merida, Vera Cruz, Guadalajara, Ixtlan, Salina Cruz and Tehuantepec. Hartman[31] states, ". . . while in Mexico for two months, six years ago, I endeavored to elicit a history of ulcer among the Indians but failed. Mantano, of the Department of Health in Mexico, verified this observation when he recently told me that the idea was prevalent among Mexican physicians that Indians rarely had ulcer. In a series of four hundred patients with histories like peptic ulcer not a single case could be demonstrated by roentgen ray."

WEST INDIES AND PANAMA

Clark (1914) reporting on a series of necropsies in the Panama Canal Zone, reported a total incidence of peptic ulcer of 4.5 per cent. In dividing this up among the various race groups there was an incidence of 5.39 per cent among West Indians, 2.8 per cent among Latin American, and 2 per cent among the white population.[60b]

Statistics taken from the medical department of the United Fruit Co. revealed that among white people admitted to the hospital there were only seven diagnosed (five gastric and two duodenal) peptic ulcers among 5,038 admissions, or one in every 720, while among the 128,861 colored and natives dependent upon the hospitals there were 16 gastric and four duodenal ulcers with no deaths, an incidence of one in every 6,443 natives and negroes.[52]

In the annual report of the Health Department of the Canal Zone in 1930, there were only 53 cases of peptic ulcer among 7,824 white admissions and only 17 peptic ulcers among 7,168 colored admissions.[52]

ARGENTINA

Professor Fernando Ruiz, University of Rosario, reporting on 1,041 autopsies performed from January 1, 1922, to July 1, 1927, found only thirty lesions of peptic ulcer, an incidence of a little less than 3 per cent.[60b]

AUSTRALIA

Frank L. Apperly, in studying the incidence of peptic ulcer in Australia, found that the highest percentage was among the public hospitals of Tasmania where there were 135 ulcers to every 1000 beds, while in West Australia the incidence was lowest with 50 cases to every 1000 beds, or in other words, a variation from 13.5 per cent to 5 per cent.[52] These reports agree rather closely with those of Wright-Smith[82] who found in 4,085 consecutive autopsies at the Royal Melbourne Hospital performed from 1927 to 1936, an incidence of 5.3 per cent of peptic ulcer.

AFRICA

The question of peptic ulcer in Africa has been left to the end of this discussion because I wish to correlate the incidence as found among the native negroes of Africa and those of America.

Stuart Bergsma, working in Addis Ababa in a hospital for two years, observed over 20 cases among the blacks. Curiously enough, among the 5,000 Caucasians he failed to find a single case of ulcer. It was his belief that the high ulcer incidence was due to the strong condiments the natives ate. Except in Abyssinia, the incidence of peptic ulcer does not seem to be remarkable in Africa. Eagle and Gillman at Johannesburg Non-European Hospital, found only four cases of peptic ulcer in 18,000 hospital inmates. A combination of these statistics with ones taken from the Government Mortuary revealed that in a total of 15,298 au-

topsies, there was an incidence of 0.9 per cent among Europeans, 0.476 per cent among Eurafricans, and 0.137 per cent among the Bantus (natives of South Africa).[21] Among 235 cases investigated Highman[32] noted only two peptic ulcer patients among the South African natives, and he remarked that this stressed the already known fact that peptic ulcer is an extremely rare condition in the Bantus.

It is interesting to note how the scale increases from native, through mixed breed to Europeans, and it was Eagle and Gillman's[21a] impression that the ratio of ulcer incidence in the South African European and Eurafrican is the same as for the American and the American negro.

Most of the American reporters have noted a low incidence of peptic ulcers in the negro. For example, Sturtevant and Shapiro found an incidence of 0.5 per cent; Boland, reporting from Grady Hospital in Atlanta gives an incidence of 0.198 per cent as compared to 0.333 among whites.[70] Portis and Jaffé found an incidence of 3.5 per cent as compared to 5.23 per cent in the white race.[60b]

Campagna[13] reporting on peptic ulcer in the negro at Charity Hospital in New Orleans, found in reviewing 300 unselected autopsies at random on negro patients, that 11.3 per cent were admitted with a chief complaint of epigastric distress and 11 out of every hundred died with an epigastric complaint. Thirteen of these deaths or 37 per cent, were directly due to peptic ulcer. Gastric ulcer predominated two to one over duodenal ulcer. In reviewing case records from July, 1937, to August, 1938, he found 132 patients discharged with peptic ulcer and the location was predominately gastric. Campagna does not mention the number of negro patients discharged during this same period so I was unable to determine the percentage. It was his belief that every third day a negro patient suffering with a peptic ulcer is admitted into Charity Hospital. DeBakey, in discussing Campagna's[13] article, remarked that the incidence of perforated ulcer per 100,000 admissions was 0.04 per cent in the white and 0.036 per cent in the colored so that in this respect there was an almost equal incidence.

No attempt has been made to determine the percentage incidence of peptic ulcer in the American negro, but it is rather generally agreed that ulcer is more infrequent in the negro than in the white race. Many supporters of the belief that ulcer is the result of higher intellectual development and mental strain have cited this fact as a point of proof, yet in contradistinction to this is the high incidence of peptic ulcer as seen among the natives of India, particularly those in the lower social strata.

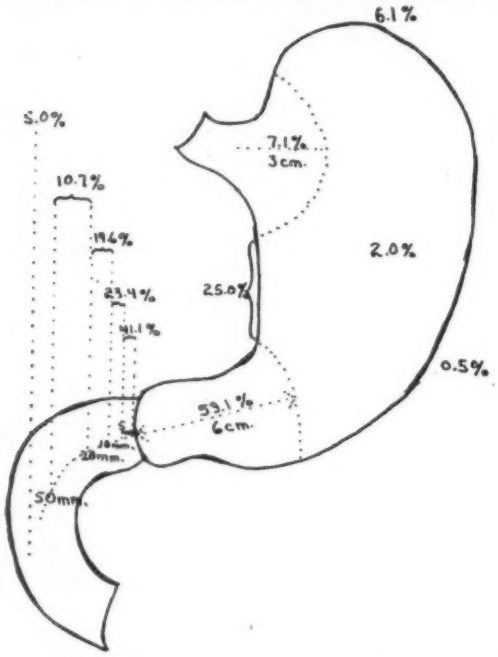
In conclusion it may be said that the incidence of peptic ulcer has yet to be determined. Why it should be so variable lies in the secret of its etiology. In our medical world it is a serious problem while to the doctor who practices to the south of us, in Russia, or among the natives of Africa it is infrequently seen (see table 3).

ANATOMIC INCIDENCE OF ULCER

Up to this point in this discussion I have used the term peptic ulcer, particularly avoiding the point of its anatomic location, for in regard to frequency, this is as much a debated point as is its incidence among the general population. Some American clinicians rather glibly make the statement that duodenal ulcer is predominant but an examination of the list of writers and their findings as shown in chart 6 will cast no little doubt upon this conclusion.

Most of the early writers were of the opinion that gastric ulcer was much more frequent than duodenal ulcer.[10, 11, 24, 41] This idea, as I attempted to explain in the introduction, was due to the rather late recognition of duodenal ulcer as an entity. An examination of the list of ratios in table 3 will show that there is a range from 2:1 gastric to duodenal to 1:28. If the attempt is made to segregate these findings it is seen that except for the reports of Osler, Hinton, Portis and Jaffé, and Campagna, the incidence of gastric to duodenal ulcer is decidedly on the duodenal side, ranging from 1:3 (Saltzstein's report on children) to 1:28 (Chamberlin's report on American Army men). The rather high percentage

CHART 2
TOPOGRAPHIC DISTRIBUTION
of 196 Gastric and 158 Duodenal Ulcers (Portis and Jaffé)



of duodenal ulcer as compared to gastric ulcer as seen in the Army can perhaps be explained on the basis of age, for as I will attempt to show later, gastric ulcer usually makes its appearance later in life than duodenal ulcer. If we ignore the incidence in children (the discussion of age incidence will show that peptic ulcer in children is comparatively rare), we see that duodenal ulcer predominates over peptic ulcer at a ration of 12:1 to 4:1 among American patients.

Portis and Jaffé's findings were based upon autopsy statistics. They noted that there was definite evidence of activity of the peptic ulcer in 339 necropsies. In 118 cases peptic ulcer was the essential lesion, while in 221 it was incidental. Therefore peptic ulcer as an *incidental* finding was almost twice as frequent. They also remarked that when peptic ulcer was the essential lesion the duodenal ulcer predominated, while if the ulcer was an incidental finding the gastric ulcer predominated. In other words, from this we might conclude that actually there are as many gastric as duodenal ulcers, but clinically duodenal ulcers predominate and that is what we find.

Hinton's statistics were taken from both necropsy and case reports and his low incidence may be partially explained upon the basis of the remarks made in the preceding paragraph. A study of his statistics from the period 1910 to 1931 reveals that there has been a gradual shift from gastric ulcer

TABLE 3

Author	Case or Percentage D. U.	Case or Percentage G. U.	Ratio of Gastric to Duodenal Ulcer
Osler (20) 1915	.....	.....	2-3:1
Hinton (33) 1910-31	1848	1919	.9:1
Mayo (17) 1920	1191	4532	1:4
Sander (69) 1933	5.9	91.5	Approx. 1:15
Southerland (71) 1937	.....	.....	1:9
Lynch (43) 1927 (Canada)	.....	.....	1:7
Eusterman (23) 1935	167	2047	1:12.2
Emery and Monroe (22) 1935	215	1167	1:5
Hinton (33) 1931	169	253	.7:1
Portis and Jaffé (60B):			
White male 1938	2.9	2.3	1:.9
White female 1938	1.3	.7	1:.7
Campagna (13):			
Negro 1940	.....	.....	2:1
Saltzstein and others (65)			
Children 1940	24	68	1:3
Dwyer and Blackford (21) 1940	103	930	1:9
Thorlakson and Hay (72) 1941	.....	.....	1:6
Chamberlin (15):			
American Army 1942	.5	142	1:28

to duodenal ulcer predominance. Whether this is actual or relative I cannot say.

Campagna's statistics were taken from negro patients entirely and agree with Eagle and Gillman's observation among the South African Bantus that gastric ulcer predominated, but his ratio of 2:1 does not begin to approach their ratio of 17:1. Portis and Jaffé found that in the negro male the incidence of duodenal ulcer was slightly higher than the incidence of gastric ulcer.

In regard to the anatomic location of ulcers in the stomach and the duodenum, there is very little disagreement. Chart 2 is a reproduction of an illustration which accompanied Portis and Jaffé's article. It is a rather composite picture of what most authorities in ulcers in the duodenum and stomach have found. [23, 26a, 60a, 60b] It will be seen that the highest incidence of ulcers in the stomach is along the lesser curvature and in the region of the pylorus, while ulcerations in the duodenum decrease as one progresses down the intestinal tract. Only 15 per cent were more than 20 mm. from the pyloric ring. In this series sixty of the 158 ulcers were on the anterior wall and 98 were on the posterior wall.

In table 4 it will be seen that while duodenal ulcers are not as prevalent in comparison to gastric ulcer in England as in America, they apparently predominate. It should be remembered that in Army statistics as was brought out previously, the age group is younger than in civil life and consequently duodenal ulcers are more prevalent; but those findings were clinical diagnoses while the statistics from Guy's Hospital and St. Bartholomew are autopsy reports and the prevalence of gastric ulcer may have been an incidental finding as in Portis and Jaffé's series rather than essential lesions. In regard to the other statistics they were cited by Dogra and Lintott and the material from which they were obtained is not given. One would imagine from the situation as seen in our own country that many were clinical findings.

TABLE 4

Author	D.U.	D.&G.	G.U.	Ratio G:D
Moynihan (17)				
Leeds, 1920	563	44	200	1:2½
Wilkie (17)				
Edinburgh, 1927	310	51	52	1:6
Young (17)				
Glasgow, 1927	244	.....	30	1:8
Scoulter (17)				
London, 1927	615	.....	660	1:1
Lintott (42)				
Guy's Hospital	500	.....	500	1:1
St. Bartholomew	375	.....	513	1.2:1
New Lodge Clinic	120	.....	44	1:3
Babey (3)				
Guy's Hospital, 1935	167	.....	191	.8:1
Hurst (37), 1941				
Hospital practice	.....	.....	.....	1:1
Better class patients	.....	.....	.....	1:4
Payne and Newman (58)				
British Army, 1940	42	7	164	1:4
Wilcox (78)				
British Army, 1940	19	.....	6	1:3
Hinds-Howell (34)				
British Army, 1941	218	.....	16	1:14
Brockbank (12)				
British Army, 1942	71.4	.....	13	1:5

INDIA

Dogra[17] states that the predominant lesion seen in India in regard to peptic ulcer is a slow growing chronic ulcer of the first part of the duodenum. This is confirmed by others[52, 61] as will be seen from the following reporters' results.

TABLE 4

		D.U.	D.&G.	G.U.	Ratio
Bradfield (17)					
Madra	1927	396	15	33	1:13
Somervell (17)					
Trancore	1927	514	4	14	1:32
Rao (17)					
Northern	c. 1938	466	14	71	1:6
Kini (17)					
Vizagapatam	1939	.....	.....	.....	1:30.4
Dogra (17)					
Madras	1940	240	12	5	1:48

Apparently in no other country in the world does duodenal ulcer prediminate so markedly over the incidence of gastric ulcer.

EUROPE

Holzweissig[38] found in Germany that there was an incidence of 6.5 per cent of cases with gastric ulcer compared to 5.3 per cent of the total cases with duodenal ul-

cer; that is to say a ratio of approximately 1:.8 gastric to duodenal ratio, while at the University clinic of Amsterdam there were 120 cases of duodenal ulcer as compared to 44 of gastric ulcer, a ratio of 3:1 [42]. Weidinger,[80] in the clinics at the University of Mauberg, found a ratio of 1:2.6 in favor of duodenal ulcer. Walters and Snell,[77] reporting on peptic ulcer as seen in Central Europe, remark that the characteristic features of the ulcerations of the stomach and duodenum in certain cities of Germany, in Vienna and Budapest are the multiplicity of lesions in both the antrum of the pylorus and duodenum and commonly associated with this is a marked gastritis, while in France the ulcerations are localized either in the duodenum or the stomach, as in the United States.

OTHER COUNTRIES

Eagle and Gillman [21a] found among the natives (Bantus) of Africa, a ratio of one duodenal ulcer to every 17 gastric ulcers, while Highman[32] observed in 245 Europeans (only two natives in this series) a ratio of 1.2 to 1 in favor of duodenal lesions.

In Java, among the Malays, duodenal ulcer is slightly more frequent than gastric ulcer while among the Chinese residing there the ratio is reversed, being about 2:1.7.

In Australia, Apperly[52] found an incidence of 3.5 gastric ulcers to one duodenal ulcer out of a series of 135 cases.

Ruiz found in Argentina a predominance of gastric ulcer, 4:1, and in a very small series, the medical department of the United Fruit Company found essentially the same thing in the West Indies. Clark reported the incidence of gastric and duodenal ulcer as equal in the Panama Canal Zone while the Department of Health of the Canal Zone several years later showed a predominance of duodenal ulcerations with a ratio of 2.1 to 1.[52]

Patricio and Silva[59] working in the Philippines, found in 93 autopsied cases, 60 gastric ulcers, 30 duodenal ulcers, and three gastro and duodenal ulcers.

As Hans May[44] has stated, no explanation can be given as to why duodenal ulcers predominate in some parts of the world while gastric ulcers are more common in others, but the weight of the evidence points toward the duodenum as being the most frequent site of ulceration.

AGE INCIDENCE

The age distribution of ulcer, like incidence and anatomic location, is variable depending upon the reviewer, but not to such a marked degree. The earlier writers noted that peptic ulcer was prevalent through middle life and during the later period of life increased.[10, 11, 30] Brinton called it the disease of middle and advancing life. Kemp in 1910, reported that 20 to 40 were the most frequent years for the female while 40 to 50 were the more frequent years for the male. These early observations do not seem to hold true in the light of today. The whole problem here again is the type of statistics we are considering, autopsy, clinical, or surgical. Naturally the autopsy statistics would reveal a different age incidence than those of the clinician who attempts to determine the age incidence by the time onset of the disease.

The conclusion of Portis and Jaffé, Hurst and Stewart are: (1) that duodenal ulcer occurs earlier in life than gastric ulcer; (2) that ulcer is much more prevalent in the male than in the female; (3) that peptic ulcer is seen most frequently in the periods of life from the thirtieth to the sixtieth year with a peak in the years of middle age, 35 to 50. Other investigators who came to essentially the same conclusions were Drossner and Miller,[20] McMullen,[47] Muslow, Meyer and Scher,[49] Patricio and Silva,[59] Wright-Smith,[82] and Gordon and Manning.[26a] Most of these men reported on autopsy material.

For those who attempt to give the age incidence according to onset, there is perhaps no more striking example than that of Allison's [1, 2] when he compared age of onset against age when seen. His figures were taken from British Navy men and would be expected to fall in younger age groups, but the distinct shift to the right in age groups of those seen as compared to the actual onset of the disease would indi-

cate that ulcer, particularly duodenal, is a disease of younger groups. This was the opinion of Dogra,[17] Dwyer,[21] Palmer,[57] Hinds-Howell,[34] Weidinger,[80] and Jennison,[39] who found in most instances that the third decade predominated.

Highman's[32] demonstration of duodenal and gastric ulcer age incidence among 245 Europeans in South Africa as he saw them clinically, though perhaps too exaggerated to be typical of America, seems to be the clinical idea among many American doctors and from a diagnostic point of view is accurate.

The diagnostician is primarily interested in knowing the possibilities of peptic ulcer in a patient complaining of dyspepsia in a given age group. Rivers and Ferreira at Mayo's, analyzed some 4,223 cases of chronic dyspepsia. They found that per 10,000 consecutive registrants, there was proportionately less dyspepsia among persons less than 30 years of age. Between this age and 60, almost half of the total number of patients had some complaint of digestive difficulty while after 60 the relative proportion who complained of dyspepsia diminished somewhat but the gravity beyond the age of 40 increased. In this series peptic ulcer ranked second (9 per cent) only to functional diseases as a cause of dyspepsia. In males it ranked second (14.1 per cent) while in females it was sixth (3.8 per cent). In the age group 15 to 24 years, peptic ulcer was third (12 per cent) as the cause of dyspepsia, while in the female it was so insignificant that it was not mentioned. In the age group 25 to 39, it was listed second (27 per cent) in the male, functional complaints being first to third (7 per cent) in the female. In the age group of 40 or over, peptic ulcer was listed first in the male with 23 per cent and third (9.5 per cent) in the female. It is interesting to note that in all age groups except this one, functional disorders were the highest causes of dyspepsia.[63a] From these studies we may conclude that any male patient coming into a clinic with a complaint of dyspepsia is extremely likely, in this country at least, to have a peptic ulcer, regardless of age, and in men over 40 it is the most likely diagnosis.

From the previous discussion and after referring to the accompanying tables, one would come to the conclusion that peptic ulcer is unheard of in children. This is not true, but according to Saltzstein and others, they are extremely rare. Proctor,[16] reviewing the literature in 1925, found only 19 cases of primary duodenal ulcer in children. Since that time there seems to have been a great increase in the number of cases diagnosed, for Saltzstein, Farbmann, and Sandweiss,[65] in reviewing the literature in 1940, found 105 cases, in the ratio of one male to one female. There seems to be an increase in occurrence, whether this is actual or improved diagnosing cannot be determined, but for example in a recent publication of the Archives of Disease in Childhood, two of the four articles in the journal are case reports of ulcerations in children. According to Clyne and Rabinowitch,[16] the first investigations of peptic ulcers in children were carried on by Theile who classified them into three groups: neonatal, infancy, and childhood. The majority of ulcers reported have been in the later group for they are rarely looked for or thought of in the former groups unless the baby develops hematemesis or tarry stools. According to Guthrie,[29] the duodenal ulcer predominates almost exclusively and is of an acute type in the majority of cases. Most of them seen in infancy are in the early weeks of life and are believed to originate after birth.

SEX INCIDENCE

References have been made in previous portions of this paper in giving statistics which have shown that the male is more frequently afflicted with peptic ulcer than the female. Upon this one point, the majority of reporters agree, but this has not always been the case. If one looks in any good medical book from the period 1856 to about 1910, in which this issue is discussed, he will find that almost universally it was the opinion at that day that women were the predominate ulcer group. This sudden change probably came as a recognition of duodenal ulcer for many reporters today

find that in regard to the sex incidence in gastric ulcer, the ratio is almost equal or slightly predominantly female.[38, 60b, 80] Duodenal ulcer, except for the Javanese[7] definitely predominates in the male. Table 5 gives the ratio of male to female as observed by different writers in regard to the occurrence of peptic ulcer. The highest ratio male : female is found in India, the lowest in Java, 0.95:1. In America and England the concensus of opinion is that peptic ulcer is seen about four times more frequently in the male than in the female.

Many attempts have been made to explain the low incidence of peptic ulcer in the female. Highman[32] states that it is generally known that the acid curve in the normal female is lower than in the male, but this does not answer the question; it only raises another. Sandweiss and others have noted that during pregnancy, symptoms of ulcer were alleviated and the effect seemed to be beneficial, while in the examination of the records of 70,130 pregnant women consecutively admitted to the hospital, they found only one case of peptic ulcer. Weidinger in Germany, noted in his series that the predominance of female ulcer patients occurred at the climacteric and he was of the opinion that vascular changes may be of some importance. Some American workers have tried to explain the female ulcer predominance on a hormonal basis.

Winklestein[79] noted, in his series of 540 peptic ulcer patients, that from 40 to 44 per cent of the women were at the menopause. He explained their development on the unchecked or hyperactivity of the anterior pituitary gland which occurs at the menopause due to the failure of the ovary to secrete estrin. He treated some 20 female ulcer patients with estrogen therapy and stated that the symptomatic relief was good. Sandweiss and his co-workers, stressing the importance of the endocrines, noted that there was a high incidence of endocrinopathies in 30 females with ulcers and that in those patients who developed ulcer before the menopause there was an aggravation of their symptoms at that time. The question is yet unsettled like so many others, and at present it is one of the many unexplainable vagaries of the disease.

TABLE 5

American or British	Year	Male:Female
Lynch	1923	2.7:1
Sturtevant & Shapiro	1926	3:1
Sander	1933	2.1:1
Eusterman & Balfour	1935	4:1
Emery & Monroe	1935	5.5:1
Wright-Smith	1937	3.95:1
Portis & Jaffé	1938	1.2:1
Jennison	1938	4.5:1
Rivers & Ferreira	1938	4:1
Campagna (Negro)	1940	8:1
Drossner & Miller	1940	3:1
Gordon & Manning	1941	2:1
Portis (text)	1941	4:1
Palmer	1942	3:1
Eagle & Gilmann (South African Bantus)	1938	8:1
Ruiz (Argentina)	1934	9:1
Patricio-Silva (Philippines)	1940	4:1
Dogra (India)	1941	18:1
Kouveenair (Javanese)	1934	.95:1
Clark (Panama)	1914	1:1

THE INCIDENCE OF COMPLICATIONS OF PEPTIC ULCER AND ASSOCIATED LESIONS

"Of the complications of peptic ulcer hemorrhage is the commonest, occurring at one time or another in approximately a third of all cases. If we except perforation, it is the most disturbing complication" (Hurst and Ryle).[36]

According to most physicians' series, this statement seems to be true. Drossner[20] found an incidence of 19 per cent hemorrhage; Blackford and Cole[4] an incidence of 14 per cent gross hemorrhage and 4 per cent massive hemorrhage with 55 deaths out of 216 deaths from ulcer; Babey[3] found an incidence of 27 per cent hemorrhage in gastric ulcer, 13 per cent duodenal ulcer, and 60 per cent anastomotic with a mortality that varied from 1 to 25 per cent, depending upon the reporter; and Gordon and Manning[20a] found an incidence of bleeding in 17.7 per cent of their autopsy cases.

In the course of preparing a Hunterian lecture on duodenal ulcer in 1932, there were found during 20 years at Guy's Hospital, only 25 deaths from hemorrhage from duodenal ulcer as compared with 128 deaths from other complications and sequels.

Hurst[36] and Stewart[67] remarked that in their private practice they had never seen reason to adopt a pessimistic attitude in the presence of these hemorrhages and they found that most physicians of wide experience share this opinion. They found that the incidence of new cases of hemorrhage in most large general practices is between 1.5 and 2 per cent per year and gave as the incidence of hemorrhage 30 per cent in gastric and duodenal ulcer and 45 per cent in anastomotic ulcer. They concluded that the mortality from hemorrhage in all cases of ulcer, whether they have previously bled or not, is about 0.4 per cent.[36]

Portis and Jaffé found hemorrhage as a cause of death in 0.43 per cent of all cases, but in those cases in which ulcer was the essential lesion, 18.3 per cent died from hemorrhage, this being considerably higher than Hurst and Stewart's quotation. It was the opinion of Portis and Jaffé[60b] that hemorrhage was the most frequent cause of death in gastric ulcer.

In other words, though hemorrhage in some physicians' opinions, is a rather frequent complication of peptic ulcer, as an actual cause of mortality it is of minor importance. The validity of that statement depends a great deal upon the age of the patient. Blackford and Cole[4] found that the commonly quoted mortality rate of 5 per cent for peptic ulcer hemorrhage is about one-sixth of the actual mortality rate in older patients, and Dwyer et al.[21] in a later article remarked that massive hemorrhage from peptic ulcer is found more frequently before 45 but there is a mortality rate of only 4 per cent in this age group, while in patients above 45 the mortality rate is about 96 per cent. Many doctors base the treatment of their patients on these statistics, conservative in the younger age groups with surgery reserved for the older age groups.

Perforation seems to be next in importance in regard to complications. In Graves'[27] article the following men are quoted and their percentage of ulcer perforation is given: Spech—10 per cent of all ulcers; Cuhor—6.5 per cent of all patients with gastric ulcer and 25 per cent of all patients with duodenal ulcer; Hart—10 per cent of all duodenal ulcers. In Drossner's[20] series there was an incidence of 11 per cent, Odom and DeBakey[55] found an incidence of 8 per cent among all ulcer cases, and Blackford and Cole[4] found an incidence of 6 per cent among their patients. They[4] also noted that there were twice as many acute perforations before the ages of 30 and 40 as in other decades. That is to say, 61 per cent of perforations occur under 45 years of age. This same observation was made by Graves. In Jennison's[39] series, perforation occurred in only 1.6 per cent of cases and was less frequent than stenosis. Gordon and Manning found perforation in 25 per cent of their cases and Portis and Jaffé[60b] found an incidence of 20 per cent perforation in those ulcers which were essential findings and came to the conclusion that perforation is the most common cause of death in cases of duodenal ulcer. This was in direct opposition to their findings in European clinics. According to Tice, most of the patients operated upon within six to eight hours recover. After twelve hours the mortality rises rapidly. In the 200 cases reported by Morrison[73] there were 43 deaths.

Another complication of peptic ulcer, though rather infrequent, is that of stenosis. This was seen in 4 per cent of Drossner's[20] cases while Jennison[39] found 2.6 per cent incidence in her series. Hurst and Stewart[38] showed that the majority of cases of pyloric obstruction, whether inflammatory or obstructive, were secondary to duodenal rather than gastric ulcer. Portis and Jaffé[60b] noted that in those cases where the ulcer was the essential finding there was a 7.5 percentage showing some evidence of stenosis.

In regard to carcinomatous change McCarty[33b] considers 68 per cent of gastric ulcers precancerous. This is regarded by most pathologists as extremely high. Boyd[8] states that about 5 per cent of chronic gastric ulcers become malignant while about 20 per cent of gastric cancer arises from preexisting ulcer. Wilensky and Tholheimer

published nearly 20 years ago that about 1 to 2 per cent of gastric ulcer was precancerous, while Hinton and Trubek[33a] came to the conclusion that it was extremely rare. Carcinoma of the duodenum is so rare that for practical purposes one need not be concerned with it if a duodenal ulcer is present.[73]

The following incidental findings in autopsies on peptic ulcers are given because they were striking enough to be noted by these men and may be of some etiologic significance though they are so variable that it is difficult to interpret them. Gordon and Manning[26a] found that 58 per cent of their ulcer cases were accompanied by definite liver damage as contrasted with a control group of cases where the incidence was 35 per cent. Portis and Jaffé[60b] were struck by the large amount of hypertensive heart disease associated with their peptic ulcer cases, but they used no control series and for patients of that age hypertensive heart disease is no infrequent finding. They also found that goiter was more frequently associated with duodenal ulcers, but they dismissed this finding with the statement that the lesion was in the main non-symptomatic and in most instances was simple colloid in character without clinical or anatomic evidence of hyperfunction. Vanderhae[75] found in 21.6 per cent of 51 cases of gastroduodenal ulceration in various stages of development, some associated well-marked localized pathologic alterations of the brain. This corresponds closely with Hartman[31] who noted 17 per cent association. Cushing called attention to the relationship of brain lesions and ulcerations of the stomach and Graves and Hodes[28] found in 147 hypophyseal tumor cases, an incidence of 4 per cent ulcerations. Since this is not as high as peptic ulcerations in many series of autopsies, it is not a very significant finding. There seems to be no idea of importance forthcoming in these various observations. One might take any one of them as evidence to support a theory to etiology, but as to their actual significance, there is too little confirmatory work to make them contributory.

OCCUPATIONAL INCIDENCE

There has been a great deal of comment in both medical and lay magazines on the importance of nervous and mental strain on the production of peptic ulcer.[24, 31, 72, 76] Therefore one would expect to find among those occupations which entailed responsibility and position, a higher incidence of dyspepsia. Unfortunately general practitioners rarely have sufficient leisure or assistance to keep records from which accurate statistics can be obtained.[36] Consequently most statistics regarding occupation are taken from groups seen in large charity institutions and do not give a fair comparison.

The early writers noted that ulcer was more prevalent among cooks, female servants, shoe makers, and porcelain makers.[10, 41] Brinton and Kemp concluded that it was a matter of coincidence, while Budd[11] stated that ulcer seemed to be much more frequent among the poor than among the rich and believed that this was due to insufficient food which resulted in anemia and a predisposition to ulcer. There seems to be little evidence that their early observation on occupation is true today.[38]

Emery and Monroe[22] found that among 1435 patients, 48 per cent did manual labor, 33 per cent clerical work, and 19 per cent housework, but no conclusion can be drawn from this because they do not compare their findings with the percentage variations among these types of clinic patients. The same criticism may be made of Church and Hinton's[14] work when they gave the following occupational incidence:

	Per cent
Chauffeur, truckman, auto mechanic	15
Clerk, ticket agent, cashier, teacher	14
Elevator operator, janitor, porter, shipping clerk	12
Carpenter, painter, steamfitter, ironworker, fireman, policeman, longshoreman	10
Tailor and cutter	7
Housewife, cook	6
Salesman	5
Artists, actor, banker	3

Walker[76] noted that among railroad workers there was an incidence of 4 per cent in 2785 patients seen. This is rather high in

consideration of peptic ulcer as it is seen and recognized among general admission patients. He concluded that this prevalence was due to the type of life these men live in their occupations.

Among different groups in the Army during the last war the incidence of peptic ulcer among officers was much higher than among enlisted men. A comparison of the statistics given by the Medical Department of the United States Army in World War I shows an incidence of 0.35 per cent per 1000 enlisted men to 0.79 per cent per 1000 among officers.[53] In a recent study by Allison[1, 2] on peptic ulcer in the Royal Navy we read, ". . . All the usual naval ratings were represented among the patients, e. g. seamen, stokers, marines, signalmen, telegraphists, cooks, and there was nothing to suggest that peptic ulcer was more prevalent in one branch of the service than another. The figures suggest that there was a higher proportion of dyspeptics in destroyers and small auxiliary craft (trawlers, drifters, mine sweepers, and patrol boats) but the number is too small and the scope too limited." He also observed that men who had retired from active service and had been recalled at the outbreak of hostilities were more affected by dyspepsia in the first year of the war than those who were still serving and who were accustomed to seagoing experience.

Hingston (1927) in Calcutta, made the observation that ulcer was more frequent in those persons of better class who are well educated and lead a more or less sedentary life, but Dogra[17] does not agree for he states that in India ulcer affects the poor in whatever walk of life they are situated. Since the majority of the poor are laborers and cultivators, the largest number of cases occurred amongst them irrespective of the race, caste or religion. Patricio and Silva,[59] reporting on occupational incidence of peptic ulcer in the Philippines, came to essentially the same conclusion as Dogra: ". . . The incidence of peptic ulcer in various occupations, shows that the disease affects chiefly people who are hard workers, i. e. laborers, carpenters and fishermen." The jobless ranked second on their list but they used no control group.

Jennison,[39] reporting on the incidence of peptic ulcer in the employees (14,000) of the Metropolitan Life Insurance Co., stated that she had expected to find the higher incidence among the clerical and executive groups where nervous and mental strain was higher, but building drays had the highest incidence of ulcer; i. e. engineers, pointers, carpenters, electricians, elevator operators, and cleaning women.

McCarrison[46] is of the opinion that occupation does not seem to be a factor. The disease occurs in persons in all walks of life, and Meyer and Scher[49] were of the opinion, after studying occupation in 97 patients, that there was a wide scattering in the type of employment carried on by these patients, including sedentary, light and labor jobs. They felt that occupation which is satisfactory to the individual is also conducive to symptomatic improvement. The wide diversity in the type of employment seemed significant, and the fact that analysis of changes in occupation would indicate that changes were often necessitated because of social maladjustment rather than physical factors of the employment. They concluded by stating that "any report on peptic ulcer therapy is inadequate which fails to consider the occupational adjustment of the patient."

Hurst and Stewart[38] were of the opinion that occupation was of little significance but stated that there seemed to be a special liability among members of the fighting service and to a less extent among members of the medical profession.

The bulk of the evidence might indicate that peptic ulcer was more prevalent among the lower income brackets which is no doubt true, considering that the lower income group is the largest in the world, but perhaps the best summary of the problem is that given by Eusterman:[23] "Consideration of occupation to peptic ulcer has given the impression that the disease is most prevalent among those who lead lives entailing great nervous strain and responsibility. This, however, awaits proof. It seems rea-

sonable that those whose routine of life, either because of force or circumstances, or because of their own dispositions, is associated with constant and excessive strain on the nervous system, should be predisposed to ulcer. It is certainly true that if such habits are not moderated, peptic ulcer is much less likely to heal."

THE INCIDENCE OF PEPTIC ULCER IN VARIOUS BODY TYPES AND PERSONALITY TYPES

Draper's[19] experience over twenty years has lead him to believe that in the morphologic phase there is a type of individual in which peptic ulcer is seen most frequently. This has been noted by several authors. Allison[1, 2] remarked in his studies on peptic ulcer in the Navy that thin types predominated and that it was exceptional to meet with a corpulent or obese subject. Actual weight for 30 of these men showed that 27 were underweight in accordance to the weight-height chart. This ranged from five to 38 pounds, with the average being 16 pounds below normal. Robinson and Brucer,[64] in an attempt to determine if there is a body habitus characteristic of the ulcer patient, compared 250 men with gastric or duodenal ulcer against a control group of 7478 males. They found that: (1) the ulcer patient tends to be normal or underweight, he is seldom overweight; (2) the ulcer patient differed from the control group in every measure except height; (3) the chest circumference of the ulcer patient tends to be much smaller than is found in an unselected population. Only rarely does a person with a large chest have ulcer; (4) the abdomen at the level of the umbilicus is smaller; (5) the body build as measured by the chest-height index shows the ulcer patient usually has a slender, narrow or linear type build, almost never lateral; (6) the surface area of the ulcer patient is smaller; (7) the systolic blood pressure is lower while the diastolic blood pressure showed no significant difference.

Feignbaum and Howat[25] found that there were no anatomic characteristics distinctive of the patient with peptic ulcer. But an examination of their report shows that they used 37 anthropometric measurements to differentiate their patients. Among some of the measurements used were nail length and breadth, finger circumference, ear length and width, interpapillary spaces. These things do not contribute to our impression as to the build of an individual; that is to say whether he is stout and fat, tall and thin, and consequently are of little value to the clinician. They did find that the thoracic A. P., chest circumference, and weight were lower than that of a similar group of diabetic patients.

After making rather detailed anthropologic measurements on 100 consecutive cases diagnosed clinically as having peptic ulcer and comparing these findings with a group of 25 healthy students, Jacob Norman[54] came to the conclusion that simple anthropologic measurements of patients suffering from gastrointestinal diseases vary from case to case and are of no practical value for diagnostic purposes.

Morley[50] stated that while duodenal ulcer was frequent in the asthenic type, duodenal ulcer otherwise occurred in hyposthenic, sthenic type and hypersthenic types in about the same proportion as these types occur in a hundred normal patients. Moynihan[51] reported that 68 per cent of his patients who had surgically verified duodenal ulcer were either of the orthotonic or hypotonic type.

Draper contends that perhaps all these patients do not represent extreme linearity. But even in the stockier forms a definite tendency to gracile bony structure, narrow subcostal and obtuse gonial angles and long, narrow teeth predominate. The linear trend is also seen in their most delicately drawn long, narrow faces. There is also found a well defined emphasis upon the feminine component of that curious mixture of masculine and feminine qualities which is common to all human beings of either sex. On the physiologic bases Draper[19] stated that the chief insignia of the ulcer patient are found in the autonomic irritability, such as sweating palms, tendency to widened palpebral fissures, slight sinus arrhythmia and prompt slowing of the heart rate by deep breathing or pressure on the carotid sinus.

In regard to personality makeup, Draper[19] analyzed 80 unselected cases of gastric and duodenal ulcer and found that 97.4 per cent of the patients had a persistent hold on mother principle and fear of loss of mother's surrogate approval. Eighty-four per cent had an inner sense of insecurity based upon actual or supposed physical inferiority including gynic emphasis, 64.9 per cent suffered with jealousy and aggression tendency, 56.2 per cent compensatory striving, and 49.2 per cent guilt and fear related to sex problems.

In regard to an inheritance of peptic ulcer constitution, there should be a higher percentage of positive family history indicative of peptic ulcer in the ulcer patient. Riecher[62] found that there is a family incidence of peptic ulcer in upwards of 30 per cent of the cases reported in the literature. Dogra,[17] in his cases in India, stated that roughly one in every five gave a family history of one or more members of the family affected. Hurst[35] was one of the first men to make note of the fact that peptic ulcer patients frequently gave a family history of this condition and he has reported several striking examples in the literature. Draper and Touraine[18] found that 70 per cent of ulcer patients' families are of slender or medium build. Of the fathers of ulcer patients, 70 per cent were described as medium or slender and only 30 per cent as stocky or stout, while 55 per cent of the mothers of ulcer patients were thin, 45 per cent were stout.

PEPTIC ULCER: ITS IMPORTANCE IN THE PRESENT NATIONAL CRISIS

It seems to me that in our present day and age, no paper on the incidence of peptic ulcer would be complete if it did not consider its significance among the armed forces.

Russel S. Boles,[6] in his presidential address to a group of gastroenterologists, remarked: "A section of gastroenterology was authorized by the War Department in July 1940, for all wartime hospitals. The War Department furthermore adopted the policy of placing a gastroenterologist on the staff of each of the general hospitals and in station hospitals of 800 bed capacity and over. That the appointment of specialists in gastroenterology will prove to be of immeasurable benefit to the military service may be gathered from the fact that diseases of the digestive tract in the present war occupy first place, and by a wide margin, as a cause of disability in the armed forces of the allied nations. In the first World War such diseases, according to the statistics of the Surgeon General's Office, were listed in no higher than seventh place. It is worthy of particular comment that peptic ulcer, especially of the duodenum, is the main reason for the high rate of disability today."

Brockbank[12], in January of 1942, reporting from England on the dyspeptic soldier said, "War had not been long declared before it was realized that the medical services of the army were facing a problem which had caused no particular anxiety during the war of 1914-1918."

By the end of February 1941, 18 months after the war started, a grand total of 10,923 soldiers had been admitted to hospitals. Of these 931 or 8.5 per cent were dyspeptic and of this group 13.3 per cent had a peptic ulcer, 71.4 per cent of the ulcer group were duodenal and 15.3 per cent pyloric. It was Brockbank's[12] opinion that only about 2 per cent of these developed during army life.

The seriousness of the problem is not that of mortality but one of morbidity. Brockbank, further elucidating, states that in the early days of the war it was their habit to return to duty, soldiers with proved ulcer in whom the lesion did not appear to be particularly active. In September 1939, 50 per cent of the men were returned to their units. This proved to be a mistake for the men became a nuisance. In October 1939, only 29 per cent were sent back to duty. Thereafter it was decided to board out of the Army all men with proved ulcer with symptoms. For the remainder of the 18 months only 7 per cent of these soldiers were sent back to duty. These were men whose symptoms were trivial and whose duties were such that they could modify army food to their needs. This was not in accordance

with Army regulations, for even in peace time it was held that peptic ulceration was incompatible with Army routine though the man was billeting himself at home. In February 1941, after the Medical War Board had attempted several measures to handle the peptic ulcer patient in the Army, even going so far as to demote him to relieve strain of responsibility, it was their opinion that in such cases it was useless as they will relapse in any category and that all men with chronic history and physical manifestation, active cases, and those with a history of operation should be discharged as permanently unfit for military duty.[12]

Brockbank concluded that there was no increase in the incidence of peptic ulceration as the result of the war. What the present war has revealed is that peptic ulcer and gastritis were exceedingly common in the civilian population before the war began, and the fact, not altogether surprising, that organic dyspepsia is incompatible with army life.

Table 6 shows the published findings in patients admitted to service hospitals in the present war in America and France. The type of organization of each one of these is as follows: Allison and Thomas reviewed 100 cases of sailors and marines with dyspepsia and demonstrated 45 per cent ulcer by x-ray; Spillane's statistics (1941) cover 12 months and are described as cases of chronic dyspepsia; Morris' (1940) conclusions are based on 500 men sent for x-ray examination and cover many of the cases in Brockbank's series. His percentage figures are higher than Brockbank's because his series did not cover those cases with mild symptoms not considered worthy of x-ray. Maingot's (1941) series deals with 256 soldiers referred to a general hospital on account of dyspeptic symptoms. Graham and Kerr's (1941) were drawn from all branches, Navy, Army, Air Force, and Women's Auxiliary Service. The Army predominated. Wilcox's (1940) material was 260 medical cases sent from France to sector hospitals in England and must be presumed to consist of the more severe grades of dyspepsia to merit being sent back from France. The same applies to the figures of Payne and Newman (1940), for their 287 patients already suggested a gastric or duodenal lesion before they were asked to see them. Chamberlin's statistics are taken from a large number of general admissions to an Army hospital in Atlanta, while those from Tilton General Hospital were cases admitted to the gastrointestinal section.

TABLE 6

Author Type	Hospital	Cases	Percentage Ulcer	G. U.	D. U.	Percentage D. U.
Allison & Thomas	Naval	100	45	6	34	85
Brockbank	Military	931	42.5	52	275	84
Graham & Kerr	Military	246	64	23	135	85
Maingot	General	256	56	15	128	89
Morris	Military	500	50	....	.....	....
Payne & Newman	E.M.S.	287	89	42	164	80
Spillane	Military	200	32	10	54	84
Wilcox	E.M.S.	41	68	7	19	73
The above are British reports.						
Chamberlin (Lawson Genl. Hosp., Atlanta)	Army	3,492	98	3	95	97
(Tilton Genl. Hosp., Fort Dix, N. J.)	Army	113	43	2	47	95

Chamberlin concluded that the statistics of peptic ulcer from two general hospitals are similar. This report shows a high incidence of enlisted personnel with ulcer who should not have been in the service. Only eight of the series developed symptoms after enlisting. In their opinion, a man with a peptic ulcer is unfit for military service. This has been borne out and emphasized by the statistics, that is, the average length of service for the entire group of ulcer patients from the two hospitals was five months. No matter how well these men were before induction, their breakdown in the army was inevitable. The chance that a patient with peptic ulcer may escape disabling symptoms in the service is slight. He is an expense to the government and his induction or commission is unwise in the light of their experience.[13]

According to Palmer,[57] the Surgeon Generals of the Army and Navy of the United States have wisely ruled that men known to have had an active ulcer within the past five years are not acceptable for service. It was his conclusion that digestive disorders con-

stitute a major problem in military medicine. The incidence of peptic ulcer in such disorders is very high.

SUMMARY

An attempt has been made to report the incidence of peptic ulcer as it is observed today. The following conclusions were drawn:

1. A study of statistical reports from various countries all over the world reveals that there is a marked variability in incidence of peptic ulcer from country to country, but that in America, approximately 12 per cent of all persons have peptic ulcer at sometime in their lives.

2. The ratio of gastric to duodenal ulcer has been discussed as to what is seen in America and other countries. This, like frequency, is extremely variable but among patients seen in this country duodenal lesions predominate more frequently, about 4:1. A schematic drawing of the stomach and duodenum shows the locations of ulcers as seen in those organs. This reveals that the most susceptible areas in the stomach were the lesser curvature and the pylorus, while the incidence in the duodenum decreased progressively from the pyloric ring.

3. Age incidence is discussed and several graphic illustrations are given which reveal that the period of life from the thirtieth to the sixtieth year with a peak in the middle age years (35-50), is the most frequent period for peptic ulcer, and secondly that duodenal ulcer makes its appearance earlier in life than gastric ulcer. The expectancy of peptic ulcer in various age groups is discussed and a short dissertation on peptic ulcer in children is given.

4. Reviewing the work of a large number of reporters, it was found that peptic ulcer is predominantly a lesion found in the male in practically every country of the world except Java. This male predominance is more marked in cases of duodenal ulcer than gastric ulcer. An attempt is made to explain this fact in the light of a few observers' work and the main evidence, though slight, points toward a hormonal basis.

5. The incidence of complications is discussed and it is found that in most instances hemorrhage is the most frequent complication but perforation is the more serious. Some incidental lesions found associated with peptic ulcer by various pathologists are given but no conclusions are drawn.

6. A study of occupation among peptic ulcer cases reveals that in most of the series the laborer and unemployed were the most frequent classes affected but in most instances no control group was used. This study was undertaken because it was my opinion that among people with greater responsibility and mental strain, peptic ulcer was more common. This idea awaits proof.

7. Draper's contention that there is a body type peculiar to peptic ulcer is discussed but the evidence is so unreliable in this respect that no definite conclusion can be drawn. A brief statement of personality makeup in the ulcer patient is given (quoted from Draper) and the importance of family history is considered.

8. The paper is concluded with a review of the problem of peptic ulcer as it is seen among the Allies of today. The evidence points that dyspepsia is the number one medical problem in the armed forces. All reports up to this date show that the incidence of ulcer is 30 per cent or over with the outstanding majority in the duodenum. The opinion of several authorities is given on this matter and the decision of the Surgeon Generals of the Army and Navy to refuse to accept these men is stated.

The conclusion is drawn that peptic ulcer is a problem of national importance, and that the high incidence as seen among the armed forces is not a result of the war but only called to attention the numerous cases which existed but which were not recognized. In spite of the tremendous amount of study and research that has been done on the problem of etiology of peptic ulcer, apparently we are no nearer the solution that Cruvielhier and Abercrombie were when they first described it.

REFERENCES

1. Allison, R. S.: Peptic ulcer in the Royal Navy: Aetiology, Lancet, 1:596, 1941.

2. Allison, R. H., and Thomas, A. R.: Peptic ulcer in the Royal Navy: symptoms and pathology, Lancet, 1:565, 1941.

3. Babey, Andrew M.: Incidence, mortality and treatment of hemorrhage in gastric, duodenal and anastomatic ulcer, Guy's Hosp. Rep., 86:129, 1936.

4. Blackford, J. M., and Cole, W. S.: Massive hemorrhage from peptic ulcer: a study based on vital statistics of the city of Seattle during four years and on personal experience in private practice, Am. J. Digest Dis., 6:637, 1939.

5. Bloom, A. R.: Roentgen diagnosis of duodenal ulcer, Radiology, 36:287, 1941.

6. Boles, Russel S.: The war's challenge to gastroenterology, Am. J. Digest Dis., 9:241, 1942.

7. Bonne, C., et al.: Morphology of the stomach and gastric secretions in Malays and Chinese and the different incidence of gastric ulcer and cancer in these races, Am. J. Cancer, 33:265, 1938.

8. Boyd, Wm.: Textbook of Pathology, 3d ed. Philadelphia, Lea and Febiger, p. 531.

9. Bergsma, Stuart: Gastric and duodenal ulcer in the black people of Abyssinia, Arch. Int. Med., 47:144, 1931.

10. Brinton, Wm.: Diseases of the Stomach, Philadelphia, Lee and Blanchard, 1865. p. 120.

11. Budd, George: On the Organic Disease and Functional Disorders of the Stomach, New York, Samuel & William Wood, 1856. p. 95.

12. Brockbank, Wm.: The dyspeptic soldier; a record of 931 consecutive cases, Lancet, 1:39, 1942.

13. Campagna, Maurice: Peptic ulcer in the negro, New Orleans M. & S. J., 92:366, 1940.

14. Church, R. E., and Hinton, J. W.: A study of 671 cases of peptic ulcer with special emphasis on 114 postoperative cases, New York State M. J., 34:1079, 1934.

15. Chamberlin, D. T.: Peptic ulcer and irritable colon in the Army, Am. J. Digest Dis., 9:245, 1942.

16. Clyne, D. G. W., and Rabinowitch, J.: Four cases of duodenal ulceration in children simulating acute appendicitis, Arch. Dis. Child., 17:102, 1942.

17. Dogra, J. R.: Studies of peptic ulcer in South India: Part 1. Introduction and clinical study of 285 cases, Indian J. M. Research, 28:145, 1940; Part 2. Statistical study, Ibid., 28:481, 1940; Part 4. Incidence of peptic ulcer in India with particular reference to South India, Ibid., 29:665, 1941.

18. Draper, G., and Touraine, G. A.: The man-environment unit and peptic ulcer, Arch. Int. Med., 49:616, 1942.

19. Draper, G.: The emotional component of the ulcer susceptible constitution, Ann. Int. Med., 16:633, 1942.

20. Drossner, J. L., and Miller, T. G.: The natural history and diagnosis of gastric ulcer, Am. J. Med. Sci., 199:20, 1940.

21. Dwyer, M. F., Blackford, J. M., et al.: Peptic ulcer: A review of 1,033 cases and a follow-up study of the patients diagnosed between ten and twenty years ago, Radiology, 36:217, 1941.

21A. Eagle, P. C., and Gillman, Joseph: The incidence of peptic ulcer in the South African Bantu, South Afr. J. Med. Sci., 3:1, 1938.

22. Emery, E. S., and Monroe, R. T.: Peptic ulcer: Nature and treatment based on a study of 1,435 cases, Arch. Int. Med., 55:271, 1935.

23. Eustermann, G. B. and Balfour, D. C.: The Stomach and Duodenum, Philadelphia, W. B. Saunders & Co. 1935.

24. Ewald, C. A.: Disease of the Stomach, New York, Appleton & Co. 1902. p. 391.

25. Feingbaum, J., and Howat, D.: The relation between physical constitution and the incidence of disease, the disease group including pepic ulcer, cholecystitis, and diabetes mellitus, J. Clin. Invest., 13:121, 1934.

26A. Gordon, J. S., and Manning, J. J.: An autopsy survey of gastroduodenal ulcers in the Philadelphia General Hospital, 1920-1937, Am. J. Med. Sci., 202:423, 1941.

26B. Graham, J. G., and Kerr, J. D. O.: Digestive disorders in the forces, Brit. M. J., 1:473, 1941.

27. Graves, Amos M.: Perforated peptic ulcer in German clinics, Ann. Surg., 98:197, 1933.

28. Graves, A. J., and Hodes, P. J.: Peptic ulcer associated with pituitary tumor, J. Florida M. A., 27:503, 1941.

29. Guthrie, K. J.: Peptic ulcer in infancy and childhood, with a review of the literature, Arch. Dis. Child., 17:82, 1942.

30. Habershon, S. O.: Disease of the Stomach, Philadelphia, Lindsay & Blakiston, 1879. p. 264.

31. Hartman, H. R.: Neurologic factor in peptic ulcer, Med. Clin. N. Amer., 1939. p. 1357-69.

32. Highman, Sonia E.: Analysis of five year hospital records of gastric and duodenal ulcers, South Afr. J. M. Sci., 5:20, 1940.

33. Hinton, J. W.: Incidence of peptic ulcer and complication, Am. J. Surg., 20:102, 1930.

33A. Hinton, J. W., and Trubex, Max: Transformation of gastric ulcer into gastric carcinoma, Surg. Gynec. & Obstet., 64:16, 1937.

34. Hinds-Howell, C. A.: Review of dyspepsia in the Army, Brit M. J., 2:473, 1941.

35. Hurst, Sir Arthur: Gastric and duodenal ulcer as a family disease, Guy's Hosp. Rep., 89:441, 1939.

36. Hurst, A. F., and Ryle, J. A.: Incidence, mortality, and treatment of hemorrhage in gastric and duodenal ulcer, Lancet, 1:1, 1937.

37. Hurst, A. F.: Digestive disorders in soldiers, Am. J. Digest. Dis., 8:321, 1941.

38. Hurst, A. F., and Stewart, M. J.: Gastric and Duodenal Ulcer, New York, Oxford Univ. Press, 1929.

39. Jennison, Janette: Observations made on a group of patients with duodenal ulcer, Am. J. Med. Sci., 196:654, 1938.

40. Jones, C. M.: Gasteroenterology: A review of the literature from July 1940 to July 1941, Arch. Int. Med., 68:765, 1941.

41. Kemp, R. C.: Diseases of the Stomach and Intestines, Philadelphia, W. B. Saunders & Co., 1910. p. 212.

42. Lintott, G. A.: Etiology of cancer of the stomach: Factors involved in the varying incidence in different classes and different countries, Guy's Hosp. Rep., 86:293, 1936.

43. Lynch, Ralph: Analysis of ulcer of the stomach and duodenum, Canad. M. A. J., 17:677, 1927.

44. May, Hans: Extent and character of peptic ulcer and gastro-duodenitis in different countries, Surg. Gynec. & Obstet., 66:666, 1938.

45. Mayo, C. H. In The Oxford Medicine. N. Y. Oxford Univ. Press, 1936. p. 125.

46. McCarrison, R.: Problems of nutrition in India, Nurt. Abst. & Rev., 2:1, 1932.

47. McMullen, J. W.: A roentgenographic study of the relative incidence of gastric and duodenal ulcer, Radiology, 37:194, 1941.

48. Meeting of the Royal Society of Medicine: Dyspepsia in the Forces, Lancet, 1:448, 1941.

49. Meyer, J., and Scher, E.: Study of the occupational adjustment of patients with peptic ulcer, Rev. Gastroenterol., 5:54, 1938.

50. Morley, H. S.: Duodenal ulcer: Observation on 250 cases with special reference to types of stomach and the corresponding test meal findings, Brit. M. J., 1:647, 1932.

51. Moynihan, B. G. A.: Observations on gastric and duodenal ulcer, Practitioner, 129:4, 1932.

52. Muller, Hugo: Geographic distribution of peptic ulcer, Am. J. Surg., 23:497, 1934.

53. Medical Department of the United States Army in the World War, XV Statistics, Part II Med. and Casualty Statistics p. 98, 122, April 1, 1917-Dec. 13, 1919.

54. Norman, Jacob: Anthropological measurements as an aid in the diagnosis of peptic ulcer, Med. Rec., 147:498, 1938.

55. Odom, C. B., and DeBakey, Michael: Acute perforated gastric and duodenal ulcer, New Orleans M. & S. J., 92:359, 1940.

56. Opper, Lincoln, and Zimmermann, H. M.: Ulcers of the digestive tract in association with the cerebral lesions, Yale J. Biol. & Med., 11:49, 1938.

57. Palmer, W. L.: The stomach and military service, J. A. M. A., 119:1155, 1942.

58. Payne, T. T., and Newman, C.: Interim report on dyspepsia in the Army, Brit. M. J., 11:819, 1940.

59. Patricio, Ignacio, and Silva, J. A.: Studies on peptic ulcer, J. Philippine M. Assoc., 20:699, 1940.

60A. Portis, S. A.: Diseases of the Digestive System, Philadelphia, Lea & Febiger, 1941. p. 478.

60B. Portis, S. A. and Jaffé, R. H.: Study of peptic ulcer based on necropsy records, J. A. M. A., 110:6, 1938.

61. Rao, M. N.: Peptic ulcer in Northern Circas: A note on incidence, Indian Med. Gazette, 73:454, 1938.

62. Riecher, H. H.: The familial incidence of peptic ulcer, Ann. Int. Med., 7:732, 1933.

63A. Rivers, A. B., and Ferreira, A. E. M.: Incidence and causes of chronic dyspepsia at various age groups: An analysis of 4,223 cases, J. A. M. A., 110:2132, 1938.

63B. Robertson, H. E., and Hargis, E. J.: Duodenal ulcer: An anatomical study, Med. Clin. N. Amer., 8:1065, 1925.

64. Robinson, S. C., and Brucer, M.: Body build of the male ulcer patient, Am. J. Digest Dis., 7:365, 1940.

65. Saltzstein, H. C., Farbmann, A. A., and Sandweiss, D. J.: The sex incidence of peptic ulcer in children, endocrinology, 27:400, 1940.

66. Sandweiss, D. J., Saltzstein, H. C., and Farbmann, A. A.: Relation of sex hormone to peptic ulcer, Am. J. Digest. Dis., 6:6, 1939.

67. Stewart, M. J.: Pathology of gastric ulcer, Brit. M. J., 2:1021, 1923.

68. Streicher, M. H., and Kuehly, M. L.: Stomach; comparative analysis of gastric cases observed for period April 1925-April 1932, Illinois M. J., 63:340, 1933.

69. Sander, Carl L.: Peptic ulcer, South. M. J., 26:343, 1933.

70. Sturtevant, Mills, and Shapiro, L. L.: Gastric and duodenal ulcer, Arch. Int. Med., 38:41, 1926.

71. Southland, C. G.: Duodenal ulcer: comparison of roentgenological and historical findings, Radiology, 8:111, 1927.

72. Thorlakson, P. H. T., and Hay, A. W. S.: Surgical management of gastric and duodenal ulcer, Canadian M. A. J., 45:298, 1941.

73. Tice, Frederick: Practice of Medicine, Hagerstown, Md., W. F. Prior Co. Vol. VII, p. 475a-476a, 1940.

74. Urquhart, R. W. I., Singleton, A. C., and Feasly, W. R.: The peptic ulcer problem. Canadian M. A. J., 45:391, 1941.

75. Vanderhae, A. R.: Histopathological changes in the nervous system in cases of peptic ulcer, Arch. Neurol. & Psychiat., 4:871, 1939.

76. Walker, W. M.: Peptic ulcer, Industrial Med., 11:106, 1942.

77. Walters, Waltman, and Snell, A. M.: Peptic ulcer as seen in Central Europe, Proc. Staff Meet. Mayo Clinic, 6:380, 1931.

78. Wilcox, P. H.: Gastric disorder in the services, Brit. M. J., 1:1008, 1940.

79. Winklestein, Asher: A possible relationship between the ductless glands secreting the sex hormones and peptic ulcer, J. Mt. Sinai Hosp., 7:29, 1940.

80. Weidinger, A.: The age and occupational incidence of gastric and duodenal ulcer, Munchen. med. wchnschr., 87:882, 1940.

81. Wolfert, W. G.: A clinical study of peptic ulcer, Med. Rec., 146:519, 1937.

82. Wright-Smith, R. J.: Peptic ulcer: An analysis of 218 cases studied at autopsy, M. J. Australia, 5:1027, 1937.

BUY

UNITED STATES WAR

BONDS and STAMPS

NEW ORLEANS
Medical and Surgical Journal

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following named Journal Committee:

C. C. deGravelles, M. D., Ex officio
For one year: Lucien A. LeDoux, M. D., Chairman
H. W. Kostmayer, M. D., Secretary
For two years: James K. Howles, M. D.
For three years: G. C. Anderson, M. D., Vice-Chairman
Leon J. Menville, M. D.

EDITORIAL STAFF

John H. Musser, M. D.....*Editor-in-Chief*
Willard R. Wirth, M. D.....*Editor*
Daniel J. Murphy, M. D.....*Associate Editor*

COLLABORATORS—COUNCILORS

Edwin L. Zander, M. D.
J. T. O'Ferrall, M. D.
Guy R. Jones, M. D.
T. B. Tooke, Sr., M. D.
George Wright, M. D.
Rhett McMahon, M. D.
C. A. Martin, M. D.
W. F. Couvillion, M. D.

Paul T. Talbot, M. D.....*General Manager*
1430 Tulane Avenue

SUBSCRIPTION TERMS: $3.00 per year in advance, postage paid, for the United States; $3.50 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Avenue, New Orleans, La.

THE JOURNAL *does not hold itself responsible for statements made by any contributor.*

THE NEW OFFICERS

Dr. Val H. Fuchs of New Orleans, the president-elect, becomes president for the coming year. The new president has had a distinguished career in the field of medicine and in the specialty to which he now limits his practice. He is a member of many local and national organizations, including the American Laryngological Society and is a diplomat of the National Board of Otolaryngology. As of now Dr. Fuchs is clinical professor of otolaryngology in the Louisiana State University School of Medicine, senior visiting otolaryngologist at Hotel Dieu, and senior otolaryngologist at Charity Hospital. In addition to his accomplishments in his special field, Dr. Fuchs has been much interested in civic activities. He has headed the medical division of the Office of Civilian Defense and accomplished a beautiful job in organizing the City of New Orleans for possible catastrophies arising from the war. He has been active in several of the lunch service clubs. He has held numerous offices for the State Medical Society and in the Orleans Parish Medical Society of which he was president in 1935. He made an extremely efficient speaker of the House of Delegates until promoted to his present position. Dr. Fuchs will make a presentable and efficient president judging by his past accomplishments.

As president-elect Dr. Rhett McMahon of Baton Rouge was selected by the House of Delegates. Dr. McMahon has served organized medicine well and for some years has been councilor of the Sixth District.

As first vice-president Dr. Daniel J. Murphy will serve for the coming year. Dr. Murphy was chairman of the Committee on Arrangements and did a most efficient piece of work at the last meeting of the State Medical Society. He is at present secretary of the Orleans Parish Medical Society.

Dr. J. P. Sanders of Shreveport, well known to the doctors of Caddo Parish and well known throughout the state, was made second vice-president, and Dr. Philip H. Jones of New Orleans was selected as third vice-president in recognition of his services to the Parish and State Medical Societies.

The councilor of the First District for the next two years will be Dr. Edwin L. Zander, whose popularity and likeability is attested to by the fact that he is president of the Orleans Parish Medical Society. Dr. J. T. O'Ferrall was re-elected councilor of the Second District, as well as Dr. T. B. Tooke, Sr., of the Fourth District, and Dr. George Wright of the Fifth District. Dr. W. E. Barker, Jr., was selected to replace Dr. McMahon as councilor of the Sixth District. With this group of new councilors

plus the councilors who have already held office for one year we are confident that the affairs of the Society in the interim between the yearly meetings will be most successfully conducted.

As chairman of the House of Delegates, Dr. Andrew V. Friedrichs was unanimously chosen by the House and Dr. M. D. Hargrove was made the vice-chairman. Dr. Friedrichs has shown himself to be an excellent parliamentarian and a splendid presiding officer.

We are glad to report that Dr. Leon J. Menville is again selected to act as a delegate to the American Medical Association. Dr. Menville has held this position for some years, is very well known to the members of the House of Delegates of the American Medical Association and wields great influence in that body. Dr. Cassius L. Peacock, a past president of Orleans Parish Medical Society, was selected as Dr. Menville's alternate.

The elective committees will be made up of an unusually well selected group of men, who can be counted upon to advance the interests of the organization and to work diligently in its behalf. These committees are as follows:

Scientific Work—Dr. P. T. Talbot, Chairman; Drs. Edgar Hull and R. T. Lucas.

Public Policy and Legislation—Dr. O. C. Rigby, Chairman; Drs. H. A. Thomas and Walter Moss.

Journal—Drs. E. L. Leckert and C. G. Cole; both for a three year term.

Medical Defense—Dr. W. A. Ellender—three year term.

To the new president, the president-elect and other officers and committeemen recently selected by the representatives of organized medicine in Louisiana we offer our sincere congratulations. We know that always the State Society will be one of your paramount interests next year and that you will guide and lead efficiently.

—o—

SOCIALIZATION OF MEDICINE

Judging from the conversations with members of the State Medical Society at the recent successful meeting of the organization, one is struck by their reactions to the EMIC plan, the working of which scheme, to the minds of most doctors, illustrates well the difficulties that would arise were medicine to be socialized and placed under the control of some central authority in Washington. The criticisms were many and varied as brought out last month in the Organization Section of the Journal. Many of the criticisms were of minor moment but they at least indicated the irritation and the discomforts that, for various reasons, arose in the consummation of the plan. These annoying and troublesome details in doing what the medical profession consider a patriotic duty certainly suggest that if the entire practice of medicine or a goodly part of it was ruled by directives and orders from Washington the lot of the physician would be extremely unhappy.

The recent Chicago fiasco in which the Montgomery Ward plant was seized on the order, apparently, of bureaucrats from Washington, should afford an example to the laity of what might happen to this country were there further regimentation of the activities of the professions, as well as of business. The reaction to the Montgomery Ward seizure throughout the country was almost unanimously against the action of a group of bureaucrats in Washington who promptly turned tail and rescinded this action when the sentiment of the country was discovered. At the present moment, public sentiment does have something to say about things which are not directly connected with the war but does the socialization of our country continue to be gradually accelerated as it has in the past few years then very definitely public opinion will not make very much difference to the bureaucrats and overlords of Washington who, for the most part, have obtained their rank and status because they lack initiative, the ability to succeed in a business or profession and who are forced to take governmental jobs telling other people what to do and what not to do and making pretty much of a mess of everything.

When one stops to consider that the

Wagner-Murray bill provides for some billions of dollars to socialize medicine and when one stops to reflect that at least half of this money will go towards the payment of salaries and administrative expenses, one must of necessity feel that not only will a tremendous amount of money be wasted but that the necessarily enormous accretion to the ranks of the bureaucrats will bring untold mental misery to the medical profession. One can readily visualize the stream of orders and directives, often conflicting, that will pour forth from the official headquarters of a state controlled medical system. One can readily conceive of confusion that will occur in the practice of medicine and the tremendous difficulties that will be encountered by the medical profession in attempting to carry out the commands that will come forth from Washington.

PENICILLIN

Up until the present time penicillin has been produced in quantities only sufficient for the armed forces and for an occasional civilian. Now the mold is being grown in quantities sufficient to release a certain amount for civilian use. In New Orleans a group of hospitals have been allowed six million Oxford units for the use of patients who have infections which yield to penicillin treatment. This is a wise step because apparently at the present moment the Army is unable to use all that is supplied to them and some of the Army installations have stocks in excess of their needs and which have not been used prior to expiration date. As a limited amount of penicillin is now available it is well for the physician to acquaint himself with those conditions in which it is useful as well as methods of administration and dosage. In August, 1943, Dr. Chester S. Keefer of Boston, chairman of the Committee on Chemotherapy and Other Agents of the Division of Medical Sciences of the National Research Council, together with other members of the Committee, published a report of 500 patients treated with penicillin. In this report[1] the types of infection that will yield to penicillin are mentioned as well as a discussion of the dosage schedule, together with an account of abnormal reactions which may occur with this form of treatment. In addition to this report, attention should be called to some of the information sent out by pharmaceutical houses. The Winthrop Chemical Company and E. R. Squibb for example, in January and May, respectively, of this year brought out annotated bibliographies which contained the articles on penicillin published up to that time. The most recent summary, a review of the literature on the use of penicillin, has just appeared in the May issue of the American Journal of the Medical Sciences.[2] These are sources from which information may be obtained by those who are not thoroughly familiar with the uses of this therapeutic agent nor the method of administration or dosage.

It may be recalled that in 1929, an Englishman, Fleming, noted that the growth of certain types of bacteria was inhibited by a mold *Penicillium notatum*. For some years this observation of Fleming went more or less unnoticed except by laboratory workers and then Florey and a group of his associates presented some very enthusiastic reports on the use of this mold, so enthusiastic that extensive investigations were begun in laboratories and clinics in most of the civilized countries. Reports that emanated from various investigators have been so dramatic that were it not for the difficulty in growing the mold and preparing it for medical usage almost every disease, infectious in nature, would probably be treated by this dried mold, but the results of carefully controlled investigations have shown that it is extremely effective only in certain types of infections, notably staphylococcic infections, certain of the coccal infections, especially pneumococcic and meningococcic diseases, as well as those due to *Streptococcus viridans*. Most of the bacillary infections are not susceptible to the action of the drug and in this group should be included *H. influenzae*. It has been found that penicillin will rapidly cure gonorrhea and in the treatment of

early syphilis it is remarkably effective, at least in the few instances that it has been employed.

Penicillin has been given by mouth but this method of administration is practically useless. Intramuscular injections are recommended for certain types of infections, such as local infections without bacteriemia and not unduly severe. It has been given also intraspinally, intranasally and has been most successful as a topical application. The method of choice, however, is to give penicillin by continuous, or practically continuous, intravenous administration. There are several reasons for this particular method of giving the preparation. Because of the very limited supply it would seem advisable to reserve its use in only severe infections which are not benefited to any great extent by other methods of administration. In these severe infections continuous intravenous drip is advisable because penicillin is very rapidly eliminated and it is advantageous to maintain a continuous blood level which cannot be done by intramuscular injection. The continuous intravenous injection of penicillin may have to be kept up for some days, hence there are certain difficulties which are bound to arise when a needle is kept continuously in a vein and when the arm or leg has to be completely immobilized. However, when the patient begins to show definite improvement then it may be possible to resort to intramuscular injections until the cure is effected.

In this very short account of penicillin it has been impossible to detail more than an infinitesimal bit of the information that has been obtained by laboratory and clinical experimentation, so it would be advisable for the doctor to familiarize himself with some of the details of penicillin administration, hence two references have been given in this editorial where the information may be obtained.

1. Keefer, C. S., Blake, F. G., Marshall, E. K., Lockwood, J. S., and Wood, W. B.: Penicillin in the treatment of infections: A report of 500 cases, J. A. M. A., 122:1217, 1943.

2. Schmidt, G. F.: Penicillin, Am. J. Med. Sci., 207:661, 1944.

ORGANIZATION SECTION

The Executive Committee dedicates this page to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

EMIC BRIEF

(Representing opinion of Louisiana State Medical Society for presentation to subcommittee on appropriations in Washington, April 28, 1944)

The following brief, prepared by a special committee on the Emergency Maternal and Infant Care Program, represents several months' experience in carrying out the program over the state and is the opinion of the House of Delegates as expressed by them and unanimously adopted on April 26. These facts were compiled after a thorough and liberal discussion by the delegates at the meeting.

"At the 1944 annual meeting of the Louisiana State Medical Society, held in New Orleans April 24-26, the operation of the Emergency Maternity Infant Care program, since its adoption in the State of Louisiana, was aired. The following objections and criticism to the plan were voiced:

"1. When this plan was originally presented to the Louisiana State Medical Society, the membership objected to it because they felt that it was a step towards socialized medicine; rather than having themselves subsidized by the Federal Government, the medical profession were willing to take care of the families of non-commissioned men in the armed forces without charge, and even though the Louisiana State Medical Society adopted the plan, UNDER PROTEST, a number of physi-

cians have returned the checks which they received for their services, because they did not wish to commit themselves to this type of practice.

"2. The manner in which the physician, who accepts these cases, is paid for his services is unjust and unfair; he is paid only from the time the application is approved by the State Board of Health, and not from the date the patient makes application for this service, or the date on which he first sees the patient. This discrepancy tends to destroy the faith of the physicians, and as a result few, if any, desire to participate in the plan, thereby defeating the purpose of the plan—instead of offering the best medical care for the families of the non-commissioned men in the armed forces, as intended by Congress, the care is inadequate. And too specialists' fees are based on the same rate as the general practitioner —no allowance is made for his added experience and knowledge.

"3. The medical profession objects to this plan because it destroys the personal relationship which exists between patient and physician. The physicians of this state feel that the plan would operate more efficiently, and to the benefit of the wife and child of the serviceman if the allotment for this service were given to the wife (the same as her dependency allotment is made), and she be allowed to make her own personal arrangements with the physician and the hospital. Whether the patient uses this allotment to pay the physician or for some other purpose is a risk he is willing to take; he takes such a risk with his private patients.

"4. Most of these patients are transients; they make application for this service at the last minute and receive medical care from place to place. Sometimes they are seen only at the time of delivery; shortly after delivery they leave to follow their husbands, thereby making it impossible to give them postnatal care; the care in such cases is inadequate, and too under these circumstances the physician is unable to complete his case and collect the fee for his services.

"5. The obstetrician is responsible for the postpartal care for six weeks following the patient's delivery regardless of what conditions may exist after delivery; he is also responsible for the infant care for six weeks following delivery (in the case of private patients the babies are usually turned over to a pediatrician for follow-up). The physicians feel that it is not right that they should neglect their private practice and give these patients this attention for the inadequate financial remuneration they receive, especially so when the obstetrician does not give pediatric care.

"6. The pediatricians too feel that the care they are called upon to give these infants is too great for the small fees.

"7. In this part of the country the racial question has always been a difficult problem, therefore, the maternal and infant care for negroes under this plan proves to be a serious problem. To begin with the regulations of the plan provide that unless a patient is accepted in a hospital which is approved by the Children's Bureau, and ward reservations accepted as demanded by the Children's Bureau, they are not eligible for medical service under the plan. The hospital facilities for these people are not available.

"8. In a number of cases this same thing happens to white people. A physician may accept a patient under this plan, and when he tries to enter her into the hospital, which he is a member of, he learns that the hospital can not accept her because it has not been certified by the Childrens' Bureau. Such people are not eligible for service under the plan and as a result the physician receives no remuneration from the Children's Bureau for his services.

"9. In a great many instances some of these patients demand better service than is provided—they require semi-private or private rooms; and as a result, according to the stipulations of the plan in operation in this state, they are not eligible for hospital service under the Emergency Maternity Infant Care program. Despite the fact that such people can pay the hospitals for a private or semi-private room, the

physician must accept the small fee provided in the contract.

"In summary we feel that there are many minor regulations which tend to cause the plan to be thrown out because it shows bad faith on the part of the Government in enacting this plan, rather than their considering the conditions and well-being of the family of the non-commissioned man in the armed forces. Therefore, we offer the following resolutions with the request that they be presented to the Sub-committee of the House Committee on Appropriations:

Resolutions

"Whereas, Congress, in indicating their own feelings of gratitude towards men in the armed forces, undoubtedly express the sentiments of Congress and the country at large by the establishing of the Emergency Maternity Infant Care plan for the care of wives and babies of the non-commissioned men in certain pay grades of the armed forces; and

"Whereas, no objection was originally voiced from any medical organization to giving these people the best possible care, and same could have been administered without friction and with a maximum of efficiency if the American Medical Association and the various medical societies had been consulted in the origin of the plan; and

"Whereas, this has not been true because of the activities of the employees of the Children's Bureau; these activities being as follows:

"Premature publicity was carried on before the plan had been adopted in this state, apparently in an attempt to discredit with the public the profession and its members who were to render this care,

"Imposing the wishes of these employees upon the entire profession of the state and the Department of Health,

"In cases of disagreement between the medical profession and the Children's Bureau that they would refuse to put into operation the plan in the state unless it received the approval of the Children's Bureau, thereby forcing the State Health Department to enforce the impartial ruling of the Children's Bureau in so far as the application of this plan,

"Also it has been brought to our attention that in some parts of the country (the State of Illinois for example) an attempt has been made to have these patients taken care of in charitable institutions and clinics by the appointed medical staff, thereby preventing the patients from having their choice of physician and hospital. The medical profession of Louisiana is strongly opposed to this being carried out in Louisiana.

"Whereas, there seems to be no assurance where the medical service under this plan will stop, as it was brought out in the last report of the American Medical Association that Junior Aviation Cadets and some of the personnel in the low commissioned grades would also be included in the plan at some later date; and

"Whereas, the evidence apparently indicates that the Children's Bureau seem to disregard the wishes of Congress and make little or no effort to cooperate with the medical profession, or the State Department of Health, but instead seek to, or at least, make no effort to avoid placing both in a bad light before the public; and,

"Whereas, the Children's Bureau is forcing in a bureaucratic manner, on the family of the men in the armed forces and the medical profession, their wishes in a dictatorial manner, rather than seeing that adequate care, as intended by Congress, is provided for women and babies of these men, and

"Whereas, the actions and policies of the Children's Bureau seem inimical to the best interests of the persons this program was designed to serve; therefore,

"Be it resolved, that the Louisiana State Medical Society express its disapproval of the conduct of the Children's Bureau and that Congress be petitioned to remove the Children's Bureau from further administration of this program and other programs of similar nature; and therefore,

"Be it further resolved, that the administering of care to wives and babies of non-commissioned men in certain pay grades of the armed forces be placed under the United States Public Health Service to be administered through the State Boards of Health with the cooperation of the medical profession; and therefore,

"Be it further resolved, that the allotment for these services be given to the wife of the man in the armed forces and she be allowed to make her own personal arrangements with the physician and hospital; and therefore,

"Be it further resolved, that Dr. C. C. deGravelles represent the medical profession of the State of Louisiana, and that he present these resolutions and the preamble to the Subcommittee of the House Committee on Appropriations and that he make the proper representation in order to have these various injustices corrected, and obtain better cooperation of this program so as to carry out the provisions for which this bill was originally created—to provide better maternal and infant care to the families of the non-commissioned men in the armed forces; and therefore,

"Be it further resolved, that the Executive Committee of the Louisiana State Medical Society send a copy of these resolutions with the preamble to the various congressmen from this state so as to inform them of the reactions of the medical profession of Louisiana with regard to the operation of this plan in this state."

Respectfully submitted,
E. L. Zander, M. D., Chairman,
H. B. Alsobrook, M. D., Member,
E. L. King, M. D., Member,
Special Committee from Committee on Maternal Welfare.

Our distinguished president at that time, Dr. C. C. deGravelles, had arranged previously for a hearing in Washington before the sub-committee on appropriations in the House of Representatives on the morning of April 28. He was very fortunate in being able to have such a representative document to submit to this committee. You should also know that this was carried out according to schedule, the brief was presented to the sub-committee, but unfortunately our protests and constructive suggestions for improvement of the service were not heeded by the committee, the House of Representatives or the Senate, and the bill for the appropriation for the continuance of the EMIC plan was signed by the President. This measure extended the service of the Children's Bureau and took care of $6,000,000 deficit which had accumulated during 1944 and added $22,000,000 for the same service up to the conclusion of the fiscal year June 30, 1945.

However, we must not be discouraged with this action of Congress, as we should all know that most of the appropriations for bureaus in Washington are very closely tied and interlocked with soldiers' benefits. In the present emergency the senators and representatives are very considerate of such legislation, for they feel to oppose it would place them in an unpatriotic position. It is believed that the principles as enumerated in this brief are very sound and should be the basis of our future considerations in the handling of any benefits for the enlisted men.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR OF MEETINGS

June 1 Clinico-pathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.
Executive Committee, Baptist Hospital, 8 p. m.

June 5 Board of Directors, Orleans Parish Medical Society, 8 p. m.

June 6 Eye, Ear, Nose and Throat Staff, 8 p, m.

June 7 Clinico-pathologic Conference, Charity Hospital, 1:30 p. m.

Clinico-pathologic Conference, Marine Hospital, 7:30 p. m.

Mercy Hospital Staff, 8 p. m.

Society for Experimental Biology and Medicine, 8 p. m., L. S. U. Medical School, Room 410.

June 12 Scientific Meeting, Orleans Parish Medical Sociey, 8. p.
June 14 Touro Infirmary Staff, 8 p. m.
Women's Auxiliary, Orleans Parish Medical Society, Orleans Club, 3 p. m.
June 15 Cinico-pathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.
June 16 I. C. R. R. Hospital Staff, 12:30 p. m.
June 19 Hotel Dieu Staff, 8 p. m.
Clinico-pathologic Conference, Baptist Hospital, 8 p. m.
June 20 Charity Hospital Medical Staff, 8 p. m.
June 21 Clinico-pathologic Conference, Charity Hospital, 1:30 p. m.
Clinico-pathologic Conference, Marine Hospital, 7:30 p. m.
Charity Hospital Surgical Staff, 8 p. m.
June 22 Clinico-pathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.
DePaul Sanitarium Staff, 8 p. m.
June 27 Baptist Hospital Staff, 8 p. m.
June 28 French Hospital Staff, 8 p. m.
June 29 Clinico-pathologic Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.
June 20 L. S. U. Faculty Club, 8 p. m.
New Orleans Hospital Dispensary for Women and Children Staff, 8 p. m.

During the month of May the Society held two meetings—one regular scientific meeting and one special meeting. At the regular meeting, held May 8, the following program was presented: Case Report by Dr. Wm. B. Clark; Criteria for Adequate Control of Diabetes Mellitus by Dr. P. H. Jones, Jr.; and The Use of Globulin Insulin by Robert Katz.

The special meeting, held May 22, was in honor of the Past Presidents of the Orleans Parish Medical Society. The Past Presidents were introduced by Dr. Daniel J. Murphy, Secretary; Dr. Edwin L. Zander paid respect to the departed Past Presidents; and Dr. Waldemar R. Metz delivered the principal address. At the close of this meeting the pictures of the January 1, 1944 Sugar Bowl Game were shown.

NEWS ITEMS

Dr. Samuel B. Nadler has recently been certified by the American Board of Internal Medicine and has also been elected to fellowship in the American College of Physicians.

Dr. Robyn Hardy, who is now stationed in England, has been promoted to the rank of lieutenant colonel.

Dr. Joseph A. Danna recently returned from the Mayo Clinic, where he spent two weeks observing.

Dr. J. L. Dixon attended a meeting of the Missouri State Medical Society in Kansas City.

At the radio forum on socialized medicine conducted by the Tulane University Radio Forum over station WNOE, April 23, Dr. H. W. Kostmayer and Dr. Alton Ochsner, represented the negative side of th argument.

Dr. I. L. Robbins addressed the opening meeting of the thirty-seventh annual convention of the Benevolent Knights of America on April 14. His subject was the part to be played by fraternal organizations in the reconstruction of communal affairs after the war, and he was the principal speaker.

Dr. Emma Moss attended a special course in hematology conducted at the University of Ohio and sponsored by the American College of Physicians, April 17-24.

Dr. Neal Owens, Dr. D. C. Browne and Dr. Rawley M. Penick attended the annual meeting of the Arkansas State Medical Society at Little Rock.

Speakers at the twenty-eighth annual meeting of the Louisiana Conference of Social Welfare were Drs. Sam Nelken, T. A. Watters, and C. P. May.

Dr. Roger J. Mailhes was certified by the American Board of Genito-Urinary Surgery at its last meeting.

Dr. Alton Ochsner attended the meetings of the American Surgical Association and the Association of Thoracic Surgeons in Chicago, and later attended other meetings in Washington and in Jackson, Miss.

Dr. W. A. Sodeman spoke on the growing importance of heart disease at the ninety-first annual meeting of the New Orleans Academy of Sciences held in New Orleans in April.

Dr. Henry O. Colomb and Dr. Lewis Golden have been re-elected to the Board of Directors of the Louisiana Society for Mental Health.

Dr. Lucian H. Landry and Haidee Weeks have been elected to the Board of Directors of Kingsley House.

Dr. Emile A. Bertucci addressed a meeting of the Association of Orleans Parish Graduate, Undergraduate and Practical Nurses on the part nurses can play in the control of tuberculosis.

Dr. Oscar Bethea spoke on penicillin before the Louisiana Society of Hospital Pharmacists, May 8, at DePaul Sanitarium.

Daniel J. Murphy, M. D., Secretary.

LOUISIANA STATE MEDICAL SOCIETY NEWS

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
East Baton Rouge	Second Wednesday of every month	Baton Rouge
Morehouse	Second Tuesday of every month	Bastrop
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

REPORT OF THE HOUSE OF DELEGATES TO THE GENERAL ASSEMBLY OF THE LOUISIANA STATE MEDICAL SOCIETY—1944

The House of Delegates held two sessions during the 1944 meeting of the State Society, in New Orleans.

There were 73 delegates, 13 past presidents (1 included in officers) and 15 officers present.

Minutes of the 1943 meeting of the House of Delegates and of meetings of the Executive Committee held since the 1943 meeting were adopted as published in the report sent to all members of the House.

Recommendations Contained in Reports:

President—1. We most earnestly recommend that the Orleans Parish Medical Society, in conjunction with the President of the Louisiana State Medical Society send a joint committee to Washington, D. C. to consult with and to interview the Louisiana Senators and Congressmen individually and collectively regarding Senate Bill 1161, requesting of them their wholehearted cooperation in defeating this bill whenever and wherever it may bob up in either the Senate or House, and to obtain from them, individually and collectively a definite commitment as to whether they will uphold organized medicine as it exists at the present time, or whether they will vote for the passage of this bill, thus destroying all progress made by our profession for the good of the public throughout the past centuries.—Approved. 2. I would like to recommend the establishment of a central bureau in Washington, D. C. sponsored by the American Medical Association. This to be a two-way committee, taking information from the state to Washington, and bringing back to us information developing in Washington from time to time on important medical subjects, legislation, and so on.—Approved.

Committee on Cancer—1. To reaffirm the activities of the Cancer Committee.—Approved. 2. That the Secretary-Treasurer write letters of appreciation to the editors of the New Orleans, Baton Rouge, Lake Charles, Monroe, Alexandria and Shreveport newspapers for articles published on cancer; also to the managers of broadcasting stations in these centers for the generous allocation of time to members of the profession and Field Army officers.—Approved. 3. That a letter of thanks be sent to Dr. David E. Brown, Director of the Louisiana State Department of Health for the donation of space in the New Orleans Medical and Surgical Journal for the publication of monthly articles on the subject of cancer.—Approved. 4. That a letter be sent to the Louisiana Division of the Women's Field Army commending them for having worked so courageously, persistently, and intelligently in our war on cancer.—Approved.

Committee on Maternal Welfare—1. That the State Society take up with the Children's Bureau, or whatever agency is necessary, to have some of the objections the doctors have found in the operation of this plan (EMIC) corrected at its source, in order to make the plan less objectionable and obtain the full cooperation of the practicing physicians throughout the state and the country.—Approved.

Committee on Mental Health — 1. Suggestion that the intense congestion of the two state mental hospitals be alleviated by the construction of a third state mental hospital, preferably located near the Parish of Orleans.—Approved.

Committee to Investigate the Subject of a Corresponding Library for Members of the Society—1. That the House of Delegates continue this committee for further work, to report to the Executive Committee in the next year.—Approved.

Louisiana State Board of Medical Examiners.—1. That Dr. L. J. Menville be recommended to the Governor for reappointment on the Board.—Motion was made and carried that Dr. Menville, Dr. A. V. Friedrichs and Dr. Val H. Fuchs be recommended for this appointment.

Committee on Resolutions—1. That a copy of these resolutions be incorporated in the minutes of the meeting, a copy be sent to the Bulletin of the Orleans Parish Medical Society and a copy pub-

lished in the New Orleans Medical and Surgical Journal.—Approved. 2. That the House of Delegates express its deepest sympathy to the bereaved family of Dr. A. W. Martin and that a copy of the resolutions in re his death be sent to his family.—Approved.

The following reports, which contained no recommendations, were accepted: Committee on Secretary-Treasurer's Report; Council; Councillors of First, Second, Third, Fourth, Fifth, Sixth, Seventh and Eighth Districts; Committees—Advisory to Woman's Auxiliary, Care of Indigent Physician, Hospitals, Journal, Medical Defense, Medical Education, Medical Testimony, Nutrition, Public Policy and Legislation, Scientific Work, To Prepare History of L. S. M. S. and Water Reed Memorial.

Communications:

Communication from the Orleans Parish Medical Society which included a copy of the report of the Public Policy and Legislative Committee of that Society was received and filed.

Communication from the South Carolina Medical Association concerning reallotment of delegates to the A. M. A. was received and filed.

Resolutions:

In re articles approving the Wagner-Murray-Dingell Bill which recently appeared in the bulletin of the Louisiana Parent-Teacher Association.—Adopted. This resolution carried the recommendation that effort should be made to acquaint all members of the Louisiana Parent-Teacher Association as to what the meaning of these articles really is and that every effort possible be made to have this subject discussed at the convention of the Louisiana Parent-Teacher Association on May 3 and 4 in New Orleans by some of the delegates of the Louisiana State Medical Society. It was brought out in the discussion of this subject that the parent-teacher associations in some localities are not properly informed on such subjects and the doctors should appear before these groups and advise them concerning same, which is the duty of every doctor in every community.

In re voluntary, non-profit, pre-payment type medical service.—Motion was made and carried that a special committee, as outlined in this resolution, be appointed and report to the Executive Committee which in turn will report to the House of Delegates for final approval; if necessary a special meeting of the House of Delegates to be called for such action.

In re efforts of Chambers of Commerce against subsidizing all forms of business and profession, including the medical profession.—Approved. It was recommended in this resolution that members of the State Society be urged to join their local Chambers of Commerce.

In re prescription writing.—Approved. This resolution contained the recommendation that this be referred to the Committee on Medical Education.

Amendments:

Motion was made and carried that Section 5 of Chapter VIII of the By-Laws be amended to state that the Budget and Finance Committee shall make a report to the House of Delegates.

Motion was made and carried that Section 1 of Chapter IX of the By-Laws be amended to read.—"Of the amounts collected, one dollar ($1.00) per capita shall be set aside as an annual entertainment fund."

Special Order:

Dr. Carl Peterson, representing the Council on Industrial Health of the A. M. A. was present and was given the privilege of the floor. He commented on the work being done by the Council.

The Emergency Maternal and Infant Care Program was discussed and a special committee, appointed by the president, presented a brief on this subject which was acccepted.

Motion was made and carried that the Executive Committee at their first meeting appoint a Committee on Nominations to select members of committees to be elected by the House.

Motion was made and carried that the president appoint a committee to investigate the Association of American Physicians and Surgeons and make a report to the Executive Committee and let the Executive Committee determine whether this organization is worthwhile and so advise the members of our organization.

Motion was made and carried that the incoming president appoint a committee to go over the Charter, Constitution and By-Laws of the State Society, details to be worked out with the Executive Committee and acted upon at the next meeting of the House of Delegates.

Election of Officers:

Dr. Rhett McMahon, President-elect; Dr. Daniel J. Murphy, First Vice-President; Dr. J. P. Sanders, Second Vice-President; Dr. P. H. Jones, Third Vice-President; Dr. Edwin L. Zander, Councilor First District; Dr. J. T. O'Ferrall, Councilor Second District, Dr. T. B. Tooke, Sr., Councilor Fourth District; Dr. George Wright, Councilor Fifth District; Dr. W. E. Barker, Jr., Councilor Sixth District; Dr. A. V. Friedrichs, Chairman House of Delegates; Dr. M. D. Hargrove, Vice-Chairman House of elegates; Dr. L. J. Menville, Delegate to A. M. A. 1945 and 1946; Dr. C. L. Peacock, Alternate to Delegate to A. M. A. 1945 and 1946.

Committees:

Scientific Work—Dr. P. T. Talbot, Chairman, Drs. Edgar Hull and R. T. Lucas.

Public Policy and Legislation—Dr. O. C. Rigby, Chairman; Drs. H. A. Thomas and Walter Moss.

Journal—Drs. E. L. Leckert and C. G. Cole; both for a three year term.

Medical Defense—Dr. W. A. Ellender—three year term.

1945 Meeting:

Motion was made and carried that place of the next meeting be left to the discretion and decision of the Executive Committee.

REPORT OF COMMITTEE ON RESOLUTIONS

Whereas, the Louisiana State Medical Society has enjoyed a very outstanding and successful meeting, and

Whereas, the success of this meeting is due to the zealous and untiring efforts and splendid cooperation of several individuals and organizations,

We, therefore, offer the following resolutions of cooperation:

First, To Dr. Daniel J. Murphy, General Chairman of the Committee on Arrangements, for his generous and untiring efforts which have contributed greatly to the success of the meeting.

Second, To the Orleans Parish Medical Society, host of the meeting, for their splendid cooperation and the excellent manner in which the convention was conducted.

Third, To the efficient staff of the Secretary-Treasurer's office and the Secretary-Treasurer whose careful preparation of the details of the meeting contributed much to its smooth operation.

Fourth, To Dr. A. V. Friedrichs, Acting Chairman of the House of Delegates, for the efficient and orderly manner in which he conducted the meeting of the House of Delegates.

Fifth, To the Woman's Auxiliary of the Louisiana State Medical Society whose wholehearted support and interest added considerably to the meeting.

Sixth, To the commercial exhibitors whose splendid displays greatly enhanced the excellence of the meeting.

Seventh, To the press of New Orleans for their interest and assistance in giving space for news of the meeting and of various personages in attendance.

Eighth, To Mr. Roy Bartlett, Convention Director, the personnel of his office, and the Roosevelt Hotel for the many courtesies extended and for their cheerful and willing attention to the innumerable calls for assistance.

Ninth, To the Association of Commerce for their invaluable assistance at the registration desk.

Tenth, To the members of the State Society who attended the meeting and whose interest and enthusiasm made the meeting a success.

We recommend that a copy of these resolutions be incorporated in the minutes of the meeting, a copy be sent to the Bulletin of the Orleans Parish Medical Society and a copy published in the New Orleans Medical and Surgical Journal.

REPORT OF COMMITTEE ON MEDICAL DEFENSE

In May, 1943 a case brought against a Shreveport member was referred to the Committee on Medical Defense. After review of the material submitted, all data were turned over to the attorney.

The attorney advised the chairman, in October, 1943, that exceptions had been filed on technical grounds to the petition submitted in the case against a New Orleans doctor, referred to the committee in October of the same year.

Advice was received from the attorney, in May, 1943, that the case against a New Orleans doctor submitted in February, 1938 had been dismissed.

Financial report of the Medical Defense Fund, indicating amount in the savings and trust fund on January 1, 1944 is in the files of the Society.

S. Chaillé Jamison, M. D., Chairman.

ANNUAL MEETING REGISTRATION

The registration at the 1944 annual meeting of the Louisiana State Medical Society in New Orleans, April 24-26, was as follows:

Members	389
Guests	36
Students and Interns	178
Exhibitors	49
Total	652

MEMBERSHIP STATUS OF PHYSICIANS IN STATE IN 1943

Parish	Registered (Eligible)	Members	Non-Members
Acadia	27	20	7
Allen	8	8 (1 inactive)	...
Ascension	11	9	2
Assumption	13	11	2
Avoyelles	20	17	3
Beauregard	8	4	4
Bienville	12	2	10
Bossier	14	5 (1 at large)	9
Caddo	206	157	49
Calcasieu	50	39	11
Caldwell	6	4	2
Cameron	4	1	3
Catahoula	5	3	2
Claiborne	12	9	3
Concordia	10	7	3
De Soto	12	10	2
East Baton Rouge	123	101	22
East Carroll	5	4	1
East Feliciana	18	14	4
Evangeline	10	4	6
Franklin	16	11	5
Grant	8	3	5
Iberia	21	19	2
Iberville	15	13 (1 honorary)	2
Jackson	10	5 (1 at large)	5
Jefferson	17	16	1
Jefferson Davis	12	11	1
Lafayette	38	31	7
Lafourche	20	19	1

La Salle	11	7		4
Lincoln	13	12		1
Livingston	6	2		4
Madison	11	8		3
Morehouse	14	12		2
Natchitoches	18	7		11
Orleans	911	627	(2 honorary) (1 at large)	284
Ouachita	70	54		16
Plaquemines	6	5		1
Pointe Coupee	7	6		1
Rapides	85	68	(3 inactive)	17
Red River	10	8		2
Richland	15	9		9
Sabine	12	10		2
St. Bernard	1	1		....
St. Charles	7	5		2
St. Helena	2			2
St. James	6	3		3
St. John	10	6		4
St. Landry	29	23		6
St. Martin	8	8		....
St. Mary	16	16		....
St. Tammany	17	13		4
Tangipahoa	31	22		9
Tensas	4	2		2
Terrebonne	15	13		2
Union	8	5		3
Vermilion	16	11		5
Vernon	12	5		7
Washington	16	13	(1 inactive)	3
Webster	27	20		7
West Baton Rouge	5	3		2
West Carroll	10	5		5
West Feliciana	3	3		....
Winn	5	3		2
	2,168	1,572		596
Intern Members 1943-44		20		
		1,592		

FRANKLIN PARISH MEDICAL SOCIETY

At the February meeting of the Franklin Parish Medical Society, the following officers were elected: President, Dr. L. F. Robinson; Vice-President, Dr. J. D. Rogers; Secretary-Treasurer, Dr. A. J. Reynolds, all of Winnsboro; Delegate, Dr. Henry Jones, Wisner.

SELECTIVE SERVICE SITUATION UNCHANGED

According to the "News" published by the War Manpower Commission, under date of May 11, 1944, the following statements are made relative to the deferment of pre-professional students: "No change has yet taken place in the Selective Service policy eliminating deferments of pre-professional students who would otherwise enter professional schools after July 1. Letters received from Chairmen commenting on Directive #344, Deferment of Pre-Professional Students, quoting a letter from the Selective Service Director, show a clear concensus on the need for modification of the existing deferment policy to make sure that the future supply of practitioners is not cut off wholly at the source. The Directing Board, of course, will continue to work on this problem."

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The following members were elected to office for the year 1944-1945:

Dr. Henry W. E. Walther.....President
Dr. William H. Gillentine.....President-elect
Dr. L. C. Chamberlain.....First Vice-president
Dr. John R. Schenken.....Second Vice-president
Dr. Curtis H. Tyrone.....Third Vice-president
Dr. Edwin H. Lawson.....Treasurer
Dr. Joseph S. D'Antoni.....Secretary
Dr. Joseph W. Reddoch.....Director of Program
Dr. Rena Crawford.....Ass't Director of Program
Dr. H. Ashton Thomas....Ass't Director of Program
Executive Committee—Dr. Oscar W. Bethea, Dr. Frederick F. Boyce, Dr. Donovan C. Browne, Dr. B. I. Burns, Dr. Dean H. Echols.

GALLERY OF PORTRAITS OF EDITORIAL STAFF OF THE JOURNAL

We regret that credit was not given to Dr. Rudolph Matas, Chairman of the Committee on History of the Louisiana State Medical Society, for collecting the photographs of the past editors of the New Orleans Medical and Surgical Journal, published in last month's issue of the Journal. Were it not for this important active committee of the State Medical Society it would have been impossible to print these photographs which took many years and much trouble in collecting.

NEWS ITEMS

Dr. Urban Maes, Director of the Department of Surgery, and Dr. James D. Rives, Clinical Professor of Surgery, attended the annual meetings of the American Surgical Association and the American Association for Thoracic Surgery, held in Chicago May 3-6. Dr. Lawrence O'Neil, Clinical Instructor in Surgery, accompanied them as their guest.

Dr. Roland Young of Covington, La., recently returned after an absence of eight months. He was the senior physician on the male service in the Taunton State Hospital just out of Boston in Massachusetts. While there he was made a member of the Massachusetts Psychiatric Society.

Mr. Bernard M. Baruch has given the sum of $1,100,000 for the use of teaching of and research in physical medicine. Part of this sum goes to Columbia University College of Physicians and Surgeons, part to the New York University College of Medicine and another part to the Medical College of Virginia. This money is given by Mr. Baruch because of his interest in the subject and

more particularly because he believes that physical medicine will play a very distinct role in the rehabilitation of the wounded and ill men discharged from the armed services.

The Eye, Ear, Nose and Throat Hospital has been left a legacy of $1,000,000 by the will of Mrs. George Spencer Eastwick. Mr. Charles E. Fenner, president of the Hospital, announces that the bequest provides for an additional wing adjoining the present building. Priorities will not permit of the immediate construction of this additional wing.

War Manpower Commission has issued a statement to the effect that physicians past the age for Army or Navy service or physically disqualified for active duty, will be able to obtain commissions for assignment to duty at the Veterans Administration as result of a recent agreement reached by the Procurement and Assignment Service of the Army and Navy and the Veterans Administration. Further information concerning this may be obtained from Dr. C. G. Cole, state chairman for physicians.

The American Congress of Physical Therapy will hold its twenty-third annual scientific and clinical session September 6, 7, 8 and 9, 1944, inclusive, at the Hotel Statler, Cleveland, Ohio.

Dr. W. T. Wootton, Hot Springs National Park, Arkansas, was elected President-Elect of the Southern Medical Association at the Richmond meeting in November 1942 and was installed President at the meeting in Cincinnati last November. Dr. Wootton died at St. Luke's Hospital in St. Louis of an embolism on Tuesday evening, May 2.

LOUISIANA TUBERCULOSIS ASSOCIATION

To Board Members, Parish Associations, Committees and Physicians:

The attached resolution was unanimously adopted at the recent annual meeting of the Louisiana Tuberculosis Association in New Orleans.

In connection with the resolution we quote below the item (No. 5 of Sec. 2A) in Act 364 which has to do with tuberculosis facilities:

"5. Not less than the sum of Five Hundred Thousand ($500,000) for the construction of four (4) one hundred (100) bed hospitals for the treatment of pulmonary tuberculosis, to be located at such places as may be designated by the United States Public Health Service."

Act 364, you will recall, was the joint resolution of the special session of 1942 calling for an amendment to the Constitution and was carried by a large majority vote in the general election of November 3, that year.

It is urgent now that the legislature:

(1) appropriate sufficient funds to secure adequate trained personnel for the full use of beds available at Greenwell Springs for the treatment of early cases, and

(2) provide custodial care for those patients with infectious, chronic tuberculosis not suitable for hospital treatment. Funds should be found to equip, staff and maintain such hospitals at convenient points throughout the state.

Will you please use your influence to this end with all senators and representatives in your area? Prompt provisions of such facilities will do much toward the control of tuberculosis in our state. We hope all TB secretaries will see that a copy of this resolution reaches every editor in your parish.

Whereas: the State of Louisiana has insufficient hospital beds in use for the care of known cases of active tuberculosis, and

Whereas: the Selective Service examinations and the Department of Health diagnostic facilities are discovering many more cases of tuberculosis needing immediate hospital care.

Be it resolved: That the Louisiana Tuberculosis Association urge the Governor, other state officials and the Legislature to provide more adequate care for tuberculosis at once by

1. Providing not only funds but also personnel to utilize Greenwell Springs Tuberculosis Hospital to capacity.

2. Providing funds to equip, staff and maintain hospitals for the custodial care of cases of infectious, chronic tuberculosis in every part of the state in completion of the plan authorized in the Constitutional Amendments of 1942.

TOURO INFIRMARY

The regular monthly meeting of the Medical Staff was held on May 10 at 8 o'clock. There were four scientific presentations, three of which were unusual cases that occurred in the hospital. The first of these was an instance of periarteritis nodosum presented by Dr. F. C. Coleman. Dr. I. A. Levin presented case reports on remnants of the cystic duct following cholecystectomy. Dr. George Susdendal discussed the use of pyridoxine hydrochloride in obstetrics. Dr. E. M. Weinshel presented a case of multiple myeloma.

SOUTHERN BAPTIST HOSPITAL

The regular monthly meeting of the Southern Baptist Mospital will be held on Tuesday, May 2, being postponed one week on account of the meeting of the Louisiana State Medical Society. The first presentation was a movie on the treatment of polysystic kidneys, comments being made by Dr. E. A. Ficklen. The next matter of scientific interest was a review of cases treated with penicillin by Dr. R. K. O'Neal and Dr. L. I. Tyler.

CORRESPONDENCE

San Francisco, Calif.,
April 27, 1944.

Louisiana State Medical Society,
Office of Secretary-Treasurer,
1430 Tulane Ave.,
New Orleans, La.
Dear Dr. Talbot:

Sincerely appreciate your sending my 1944 membership card. Have also been enjoying the issues of the Journal, for which I am indeed grateful. We, "destroyer doctors", (when our ships are as lucky (or blessed) as ours has been), have only a small amount of medical work to keep us on our toes. Our people stay wonderfully healthy and we've escaped with few injuries, for which we are plenty happy; in that way, they are by all means best "fit to fight". Reading thus becomes pretty important, and I know that the articles in the Journal will stand me in good stead.

Pardon the tardiness of this acknowledgment of receipt of a membership card, and again, thanks very much for the card and the Journal.

Sincerely,
W. H. Harris, Jr., M. D.

Washington, D. C.
April 27, 1944.

Dr. J. H. Musser, Editor,
New Orleans Medical and Surgical Journal,
1430 Tulane Avenue,
New Orleans, Louisiana.
My Dear Dr. Musser:

The National Naval Medical Center of Bethesda, Maryland, is endeavoring to collect for its archives a complete set of commissions issued to Naval medical officers, and signed by past Presidents of the United States.

There is a small nidus now at the Center and it is hoped to be able to build this up to completion. Through the Navy Department Library and the National Archives a few more have been located. I am wondering whether you would care to insert a small item in your "Journal" to this effect, with the idea that various libraries or individuals may have in their possession such old commissions and would be willing to turn them over to the Center. If such are found and the owners are so generous, there could be no more fitting enshrinement of them than their use for this purpose.

Any assistance that you and the "Journal" can extend will be greatly appreciated by the Surgeon General.

With best regards.

Very truly yours,
Robert C. Ransdell,
Commander, (MC), USNR,
Division of Publications.

HEALTH OF NEW ORLEANS

The Bureau of the Census, Department of Commerce, reported that there occurred in New Orleans the week ending April 15, 117 deaths, divided 74 white, 43 colored. In this week there were only two children under one year of age who died. The following week ending April 22 there were 125 deaths, divisioned 72 white, 53 non-white, with 13 infant deaths. For the week which closed April 29 there was rather a sharp increase in the number of deaths in the city, 162 New Orleanians expiring in this particular week, 108 of whom were white and 54 were colored. There was an increase also in the infant deaths, with 18 small babies dying. For the week which terminated May 6 there was a sharp decrease in the number of deaths in the city. There were 79 white people who died and 52 colored for a total of 131, with only six infant deaths. The next week ending May 13 there were 139 deaths, divided 82 white, 57 non-white, and 10 infants.

INFECTIOUS DISEASES IN LOUISIANA

The Louisiana State Board of Health reported that for the week ending April 8 a large number of measles cases reported, 336, indicated a mild epidemic of this disease. Other diseases reported in numbers greater than 10 were 67 of influenza, 61 of mumps, 20 of pulmonary tuberculosis, 12 each of chickenpox and meningitis. There were also reported 11 cases of malaria and 15 of unclassified pneumonia. One case of poliomyelitis was discovered this week appearing in Jefferson Parish. Most of the mumps cases were reported from military sources. Measles was still rampant in the following week which closed April 15, as there were 194 cases listed. In order of frequency this disease was followed by 51 cases of mumps, 43 of pulmonary tuberculosis, 12 of pneumonia, and 19 of whooping cough. Eleven of the measles cases and 15 of the mumps were reported from military sources. For the week ending April 22 the incidence of measles diminished, there being onliy 116 cases being reported this week, followed by 57 of pulmonary tuberculosis, 51 of mumps, 33 of hookworm infestation, 21 of chickenpox, 18 of meningitis and 13 of malaria. There were also reported 17 cases of unclassified pneumonia. One case of poliomyelitis was reported this week. The week ending April 29 was the week in which the venereal diseases were recorded. Aside from these measles led other reportable diseases with 103 cases, followed by 46 of pulmonary tuberculosis, 44 of mumps, 36 of chickenpox, 13 of German measles and 10 of malaria. Of the venereal diseases for the four week period there were 1,473 cases of syphilis listed, 1,445 of gonorrhea, 60 of chancroid. Four hundred and four of the cases of gonorrhea, 115 of the cases of syphilis, and 39 of chancroid were from military sources. This week also saw the reporting of four cases of poliomyelitis. The mild epidemic of measles was still continuing for the week ending May 6, as in this week there were reported 123 cases, followed by 31 of mumps, 26 each of pulmonary tuberculosis and malaria, 23 of pneumo-

coccic pneumonia, 32 of unclassified pneumonia, 19 of chickenpox, and 12 of septic sore throat. One case of smallpox was reported from Lafayette Parish in this week.

RESOLUTIONS OF RESPECT

Whereas, That beneficient power that stands beyond the dim unknown keeping watch above His own, did see fit on February 27, 1944, to take from his labors that faithful doctor and "good physician", Dr. George W. Gaines of Tallulah, La., did call him to sleep, to escape from himself, and to rest from the burdens he had carried for his fellow man for eighty-odd years, and did permit him in the fullness of an eventful life, to depart as a candle burnt out, and

Whereas, Our absent friend was not only a faithful husband, a good parent, but a model citizen, who was a forceful exponent of all that was good, and in his struggle upward for honorable recognition and to imminent positions in response to the voice of ambition, trampled not upon the prostrate forms of the less fortunate, but, in good samaritan faith, lifted them and helped them to find the highway that makes sure a safer journey, and

Whereas, Doctor Gaines was an honorary member of the Issaquena-Sharkey-Warren Counties Medical Society of Mississippi for many years and was most punctual in attendance, contributing invaluable experiences and erudite professional knowledge, enhancing the prestige, dignity, and services of this society,

Therefore, be it Resolved, that we, the composite membership of the society, take note of his abiding absence and our irretrievable loss, not by a futile recount of days and hours and years and joys that are irrevocably past, but, in keeping with his high ideals of life, rededicate the remaining years of our life to a greater service in the profession he loved so well, served so faithfully, with an enthusiasm and wisdom possessed only by great and magnanimous souls,

Be it Further Resolved, That a copy of these resolutions be spread upon the minutes of this society, that copies be sent the press of Vicksburg and Tallulah, and to the New Orleans Medical and Surgical Journal and Mississippi Doctor and that a copy be sent to his family that they may know our sympathy and appreciation abides with them.

Geo. M. Street
Guy Jarratt
F. Michael Smith
Committee on Resolutions.

DR. ROBERT W. COOPER
(1897-1944)

Dr. Robert Williams Cooper, of Shreveport, born October 1, 1897, was graduated from the University of Pennsylvania, School of Medicine in 1923. He was a member of the Radiological Society of North American, and American College of Radiology. He was a specialist certified by the American Board of Radiology; a radiologist at the Shreveport Charity Hospital and the T. E. Schumpert Memorial Sanitarium; and secretary of the Shreveport Clinic. He died in Galveston, Texas, March 13, 1944.

DR. J. SAUTER MULLER
(1884-1944)

Dr. J. Sauter Muller of New Orleans died May 19 at Hotel Dieu. Dr. Muller led an active busy life in New Orleans. He was a veteran of the first war and for many years was physician at one of the big hotels in the city. He was a man universally liked and his death will leave a vacancy in the medical profession of New Orleans.

WOMAN'S AUXILIARY

REPORT OF THE ANNUAL MEETING OF THE WOMAN'S AUXILIARY TO THE LOUISIANA STATE MEDICAL SOCIETY

Wartime restrictions prevailing, the Woman's Auxilary to the Louisiana State Medical Society nevertheless attracted a sizable gathering at its annual meeting held April 24, 25, and 26 at New Orleans, with headquarters in the Roosevelt Hotel. With the gracious personality of Mrs. George Taquino presiding, business and social arrangements were smoothly handled.

Dr. and Mrs. Taquino were hosts at a pre-convention evening party honoring Mrs. John Pierpont Helmick, president of the Woman's Auxiliary to the Southern Medical Association, and Mrs. Rhodes Spedale, president-elect of the Louisiana Auxiliary. Mrs. Eben J. Carey, president of the Woman's Auxiliary to the American Medical Association, who was also to have been an honoree, was unable to keep the commitment previously arranged with the convention committee.

The general session was opened at 9:30 a. m. on April 25, war-time crowding necessitating using a meeting room which had to be vacated before the noon hour. War conditions were indeed the keynote of the meeting from the moment of the invocation by Reverend John W. Hynes, S. J. With her restricted time, with a number of delegates and even presidents of the parish societies absent, Mrs. Taquino handled the situation masterfully. Each individual on the program was granted ample opportunity to present his or her important message to the gathering.

Following the official address of welcome from Mrs. John S. Dunn, president of the Woman's Auxiliary to the Orleans Parish Medical Society, and the response by Mrs. Charles M. Horton of Franklin, greetings were extended to the ladies by Drs. Edwin L. Zander, C. C. de Gravelles, Daniel J. Murphy, and Val H. Fuchs. The men stressed the importance of opposing the Wagner-Murray

Bill, and the part the auxiliary could play in the presentation of adverse material to the various lay women's groups.

The president of the Woman's Auxiliary to the Southern Medical Association is a dynamic individual. With her dual presidency embracing direction of the West Virginia group as well, she was in a position to transmit many pertinent suggestions to leaders and members.

A dignified and stirring "In Memoriam" for members of the auxiliary who have passed on since the last meeting was offered by Mrs. S. M. Blackshear of New Orleans. During the ceremony of presentation of a bouquet of American Beauty roses honoring these departed members, Mrs. Walter C. Hava sang beautifully and appropriately, accompanying herself. Tiny Penelope Matthews Martin and Mitylene Parham, descendents of New Orleans physicians, carried the offering and presented them to their chair. Reverend Shardon D'Aubret offered the benediction for the occasion.

The business meeting which followed was expeditiously handled. Following the reading of minutes of the last annual meeting, Mrs. Taquino delivered an able summary of her busy presidency. Parish presidents, who found it convenient to attend the state meeting, presented in person a report of their activities. The reports of the absentees were gratefully accepted and placed on file in the records of the auxiliary. An amazing amount and variety of work was accomplished by Auxiliary members who found their days filled with activities.

"Hold fast to your identities as auxiliaries and do not allow your members to dissipate their forces away from the medical profession" was the message sent by Mrs. Eben J. Carey as president to the Woman's Auxiliary to the American Medical Association. Mrs. Edwin R. Guidry of New Orleans delivered the report in Mrs. Carey's absence. Mrs. Wiley R. Buffington, who attended the meeting of the Woman's Auxiliary to the Southern Medical Association, brough back a full and animated report for the guidance of Louisiana members.

General discussion providing ways and means for the carrying out of the ambitions program of combating the Wagner-Murray legislation as admonished by the officers of the parent organization and as outlined in Mrs. Helmick's suggestions, enlivened the period for new business. The installation of Mrs. Rhodes Spedale of Plaquemine and her cohorts inaugurates an eventful year.

Mrs. Arthur A. Herold of Shreveport installed the new officers with a grave seriousness worthy of the dignity of the group and the profession they represent.

Mrs. Spedale finds herself at the helm in a period pregnant with implications for the future of American medicine on the post-war horizon. "The Women's Auxiliaries of both state and parish must remain uninvolved in other considerations to the extent that they do not forget the main objective for which they have been organized", was the greeting of the president, and under such administration an optimum amount of help and advancement to the medical cause may be expected.

Much credit for the smooth efficiency of convention proceedings can be accorded to the parallel qualities of Mrs. Carroll F. Gelbke of Gretna, general chairman on arrangements, and her able assistants, Mrs. C. Grenes Cole and Mrs. Roy B. Harrison of New Orleans. The honorary committee included Mesdames Edwin L. Zander, George J. Taquino, John S. Dunn and C. C. de Gravelles. The chairmen of sub-committees also most ably handled their commitments.

A beautifully appointed tea held at the Patio Royale in the romantic French quarter and honoring the new president terminated the official proceedings of the convention.

Respectfully submitted,

Mrs. Edwin R. Guidry,
Chairman of Press and Publicity

—0—

BOOK REVIEWS

Principles and Practice of Tropical Medicine, Part I: By L. Everard Napier, C. I. E., F. R. C. P., Calcutta, Thacker, Spink & Co., 1943. Pp. 522. Price, $8.00 (20 rupees).

Part I of Dr. Napier's work on tropical medicine deals, as the jacket indicates, with the more important tropical diseases. Part II is expected to be issued within a year. The author calls attention to the absence of an index, which, however, will come with Part II; but this is not a serious omission since each article has a very complete outline of contents. All of the fields are covered by Dr. Napier but the article on leprosy is written by Dr. John Lowe. The volume is well illustrated, most of the illustrations being original. As might be expected, the book has a distinct flavor of British India. This is well illustrated, for example, in the article on the typhus fevers, where we find a separate discussion headed "Typhus Fever in India." In many of the subjects the preventive medicine aspects are very fully covered, for example, malaria, cholera, and yellow fever. In the latter, special emphasis is put on the problem as it confronts the Orient. The author has avoided mistakes commonly made. We find the clear statement that no mammal reservoir for Rocky Mountain spotted fever has been proved, and it is equally commendable that he does not see the

usually mentioned, but often imaginary, diagnostic difficulties as between tularemia and plague. When Dr. Napier's views vary from those usually held, the fact is made clear. Thus, he restricts the term "epidemic diseases" to examples of man to man transmission, in which man forms an essential link. This has excluded the bubonic type of plague. Under amebic dysentery the author, in a well reasoned argument, expresses the unwillingness to use the term "amebiasis" as covering all forms of infestation of *Endamoeba hystolitica*, preferring the term "amebic dysentery" for the definite clinical manifestations; this, the reviewer considers a very sound position. One interested especially in biological therapy turns to the author's views on serums and vaccines. They are judged to be more discriminating than one finds in many texts.

Napier regards anti-plague serum as of no great value; anti-tularemia serum he rates even lower, but is rather favorably impressed by Shiga dysentery antitoxic serum. He favors the use of undulant fever vaccine in chronic cases and anti-serum in acute cases. He is mildly favorable toward choleraphage in therapy but is skeptical of cholera vaccine in prophylaxis. Contrary to the views held by some workers he regards anti-plague vaccine as of value in the prevention of pneumonic plague. The author was engaged for many years in laboratory studies, but properly warns against over-emphasis of their importance or of too much dependence on them. In the sections on laboratory work, one finds much detail in many places, though nothing superfluous; for example, in the discussion of kala-azar, detailed instructions are given as to sternal and splenic punctures; and under cholera in India, it is made clear that there may be great difficulty in determining the presence of, and even uncertainty as to just what constitutes a true cholera vibrio. The author may have thought it unnecessary, but from the reviewer's point of view, a brief outline of the postmortem appearance of naturally acquired rat plague might have been included to advantage. A few points might be mentioned on which the author's views are of special interest; he considers alcohol at the end of the day's work as a sometimes useful psychologic stimulant, and places climate very low among the etiologic factors of tropical neurasthenia. In the very excellent article on malaria, he would restrict parenteral therapy to one day except in very rare instances. To any one intelligently interested in leprosy, the view that usually only infectious cases should be isolated is sound, as well as the opinion that the mere making of a positive diagnosis is not very helpful; type and stage also are important. Among the few statements on which there might be difference of opinion, the following are noted: The reference to tick-borne relapsing fever in the southern and eastern United States is hardly in accordance with experience, though the author mentions the states in which it is more frequent in the west and southwest. The statement that amebic liver abscesses do not occur in temperate climates is perhaps too strong, judged by experience in the United States. No attempt has been made to check editorial matters but it is noted that "Siskiyou" lacks the final "u". Most of the subjects are dealt with in a way that indicates the sure confidence of the competent, experienced observer. The work should be of great value to students, physicians, and to anyone else who wishes to be familiar with the conditions discussed. The book is a valuable addition to the literature on tropical medicine and those interested in this field will hope for the early appearance of Part II.

G. M. McCoy, M. D.

The Permeability of Natural Membranes: By Hugh Davson, D. Sc. and James F. Danielli, D. Sc., A. I. C. with a foreward by E. Newton Harvey. New York, Macmillan Co., 1943. Pp. 362. Price, $3.75.

This timely monograph, a general survey of the field of permeability, will be welcomed by students in medicine, physiology, and biochemistry, as a valuable supplement to the brief and often inaccurate treatment of the subject in the average textbook. The authors point out that permeability studies have passed beyond the preliminary exploratory stage. They have now reached the stage at which quantitative analysis is important and it becomes necessary to define whan can, and what cannot, be done by the cell membrane, "by surface action" and by "changes of permeability."

There are 21 chapters dealing, among other matters. with the significance and interpretation of permeability studies, methods, equations, structure of the plasma membrane, permeability to gases, water, proteins, electrolytes and dyes. The chapters on the permeability of erythrocytes and the kidney and the effect on permeability of narcotics and temperature should be of particular interest to the student in medicine. There are frequent summaries and a good bibliography at the end of each chapter and the last chapter brings together the evidence for the modern theories of cell permeability.

H. S. Mayerson, Ph. D.

Pain (Proceedings of the Association for research in Nervous and Mental Disease, 1942). Baltimore, Williams and Wilkins Co., 1943. Pp. 468. Illus. tables. Price, $7.50.

There is no clinician to whom the symptom pain is not of utmost importance. It is probably the most prevalent presenting symptom in a case history. Call for relief must be met. It seems, therefore, an extremely excellent selection on the part of the Association for Research in Nervous and Mental Disease to give us this contribution entitled "Pain."

The choice of contributors brings together authorities in many fields. Unfortunately all fields could not be embraced. Unhappily it is apparent

that a limitation on space was demanded for some presentations reveal the condensation of thought and indicate the wealth of information withheld.

Pain threshold and factors contributing to perception and reaction are covered with a thoroughness calling for physiologists, anatomists, neurologists and psychiatrists, neurosurgeons, internists and dermatologists.

An otolaryngologist, an orthopedist, a urologist, a gastroenterologist, and a cardiologist presented their aspects joining the neurologist and psychiatrist in an evaluation of the type pain.

The analgesics are given pharmacologic and clinical evaluation. Surgical orthopedic and neurologic aspects, were considered in therapeusis and finally the virtues of psychiatry were expounded.

It would be impossible properly to praise each contributor in relation to his achievement without becoming voluminous. The reviewer found each section well prepared, pleasantly readable and understandable for one departing from familiar fields. The clinical application in each instance was appreciable. Illustrations are ample and well chosen.

On the whole this is a noteworthy accomplishment and the editorial board, Drs. Wolff, Gasser and Hinsey, are to be complimented with the contributors in adding this twenty-third addition to an already illustrious series. It will maintain the standard so well established.

GORDON MCHARDY, M. D.

Medical Care of the Discharged Hospital Patient: By Frode Jensen, M. D., H. G. Weiskotten, M. D., and Margaret A. Thomas, M. A.. New York, 1944. Pp. 94. Price, $1.00.

The purpose of this little book is to report an experiment conducted by the Syracuse University Hospital, from July 1, 1940 to February 1, 1942, with regard to follow-up care of patients discharged from the medical wards of the hospital. The hospital staff has made the observation that almost 90 per cent of the patients admitted to the medical wards were suffering from chronic diseases and that about one-third of these had chronic degenerative cardiovascular diseases. In order to reduce the number of admissions and the days of hospital care for this large group of clinic patients the University Hospital arranged for an extramural resident to make regular calls upon these patients at home and to prescribe for them at home as much as possible. It was found that the number of admissions for these patients to hospital wards was reduced considerably. In fact, the hospital estimated that three times the cost of the entire experiment was saved in terms of hospital cost, not to mention the benefits derived in making beds available for more acute illnesses. The program was discontinued because the resident entered the Armed Service.

The little book is very challenging. The problem of chronically ill patients in any general hospital is particularly acute at the present day because of the shortage of beds. On a representative day (February 28, 1944) a survey of the patients in Charity Hospital revealed one-third of the hospital beds occupied by chronically ill patients, exclusive of tuberculosis and venereal diseases. Upon discharge from the hospital most of these patients are referred to the clinic for periodic observation. A substantial percentage, however, failed to report or were unable to purchase medication or arrange transportation. The result is that many of these experience progression of their disease until they must return to the hospital for readmission.

One wonders if home visits of clinic patients, such as this experiment reported by the Syracuse University Hospital, may not be the ultimate answer provided professional care could be secured during this emergency.

ROSCOE L. PULLEN, M. D.

Medical Parasitology and Zoology: By Ralph Welty Nauss, B. Sc., M. D., Dr. P. H. New York, Paul B. Hoeber, 1944. Pp. 534. Price, $6.00.

This war has created conditions throughout the world that will encourage the international exchange of human parasites, and temperate countries that have hitherto been somewhat poorly supplied with parasitic fauna will, during and after the war, undoubtedly enrich themselves in this direction, even if they impoverish themselves in others. It is therefore natural that there should be a boom in the study of these parasites and the diseases that they cause, and medical schools are considering the advisability of including much more parasitology in their curricula. This book has obviously been written to meet this new tendency.

It is a short book that skims over the subject lightly, but usually accurately and efficiently, and it will certainly meet the needs of the student in most medical schools in this country; one must exclude Tulane, as this school has for many years made a specialty of tropical medicine and parasitology and expects more from its students than this book will give them.

It would be easy to criticize the book on account of the many omissions, and to question the emphasis given to certain aspects of the subjects included, but this would scarcely be fair in view of the obvious desire of the writer to make the whole subject short, simple and concise. The advanced student will however find the book disappointing, and one does question whether it is advisable (in 1944) to let any student believe that in malaria the sporozoites enter directly into the red cells and start the schizogony cycle, that sodium antimony tartrate is the drug now generally used in the treatment of kala-azar, or that the aldehyde test will give an immediate indication as to whether the patient is cured or not.

There are a few indications of careless proof reading.

On the whole this book should prove a very use-

ful addition to the library of the medical student who will find it pleasanter to read and much less alarming than many of the larger books on which he has had to rely hitherto. He will find the glossary at the end particularly useful.

L. E. NAPIER, M. D.

Pathology and Therapy of Rheumatic Fever: By Leopold Lichtwitz, M. D. New York, Grune and Stratton, Inc., 1944. Pp. 211. Price, $4.75.

The opening sentence to this book states that rheumatic fever is a non-infectious disease. This point of view is not in accord with the prevalent theory that rheumatic fever is related in some way to infections of hemolytic streptococcus. Throughout this little book the author develops his theory of the allergic origin of rheumatic fever due to sensitization to antigens, protein in nature, which in most cases are believed to be products of microorganisms. A similar relationship to nephritis and rheumatoid arthritis is likewise considered.

The book is well written and well illustrated, and should provide much usefulness to the thoughtful student of infectious diseases.

ROSCOE L. PULLEN, M. D.

Elimination Diets and the Patient's Allergies: By Albert H. Rower. Philadelphia, Lea and Febiger, 1944. Pp. 256. Price, $3.50.

This is the second division of a well known and useful book. The basic thesis of the author is that skin testing as a means of determining food sensitizations is fallacious. Certainly this is the general experience. It follows then that other approaches are required to uncover the responsible foodstuffs. The Rowe elimination diets have long been helpful in this regard. Making allowance for a certain enthusiasm about the importance of foods in the production of symptoms the book, nevertheless, is of value to all physicians and to allergists especially.

VINCENT J. DERBES, M. D.

The Biochemistry of Malignant Tumors: By Kurt Stern, M. D. University of Vienna, and Robert Willheim, M. D., University of Philippines. Brookly, N. Y., Reference Press. 950 pp. Price, $12.00.

In this treatise the attempt has been made to cover the relationship of cancer to chemistry in the broadcast meaning of both words, based on a well-documented collection of the literature through 1941. It is neither a textbook nor an attempt to propound a "cancer theory". A previous monograph by these authors "Die Wege und Ergebnisse chemische Krebsforschung" (1936) has been extended in scope and brought to date. In the present volume emphasis has been placed upon the work of the past twenty-five years with the idea of summarizing what is known today, and to point out what is not known in the field.

In view of the enormous scope of the topics to be dealt with, the authors thought it preferable to employ a somewhat arbitrary grouping of the material in accordance with the principles of biochemistry. At the same time they felt it necessary to include some data which at present do not appear to be directly related to chemistry—an overstepping of boundaries which seems justified in the interest of a coherent presentation. Chapter headings include Inorganic Chemistry, Organic Chemistry, Physical Chemistry, Enzymes, Nutrition and Vitamins, Metabolism, Endocrine Glands and Their Hormones, Immunology, Biochemical Aspects of Tumor Origin and Tumor Growth and Chemical and Biological Tumor Diagnostics. Details of methodological nature, chemical formulae and mathematical equations have not been presented but reference has been made to the original articles.

A. O. KASTLER, Ph.D.

Erratum: The price of the volume, Biomicroscopy of the Eye by Berliner, was incorrectly noted in the April issue. The correct price is $17.50.

PUBLICATIONS RECEIVED

Grune & Stratton, New York: The Psychology of Women, A Psychoanalytic Interpretation, by Helene Deutsch, M. D. Forsdike's Textbook of Gynecology, by J. H. Peel, M. A., B. M., B. Ch. (Oxon.), F. R. C. S., M. R. C. O. G. The Management of Neuro-syphilis, by Bernard Dattner, M. D., Jur. D.

W. B. Saunders Company, Philadelphia and London: Medical Diagnosis, Applied Physical Diagnosis, edited by Roscoe L. Pullen, A. B., M. D. Aesculapius in Latin America, by Aristides A. Moll, Ph. D. The American Illustrated Medical Dictionary, by W. A. Newman Dorland, A. M., M. D., F. A. C. S., 20th edition.

Philosophical Library, New York: Virus Diseases in Man, Animal and Plant, by Gustav Seiffert. Practical Malaria Control, a Handbook for Field Workers, by Carl E. M. Gunther, M. D., B. S., D. T. M. (Sydney). Minor Surgery, edited by Humphry Rolleston and Alan Moncrieff.

Charles C. Thomas, Publisher, Springfield, Illinois: Tuberculosis of the Ear, Nose, and Throat, including the Larynx, the Trachea, and the Bronchi, by Mervin C. Myerson, M. D. Manual of Human Protozoa, by Richard R. Kudo, D. Sc.

Cornell University Press, Ithaca, New York: Civilization and Disease, by Henry E. Sigerist, M. D., D. Litt., LL.D.

Lea & Febiger, Philadelphia: A Manual of Physical Therapy, by Richard Kovacs, M. D.

J. B. Lippincott Company, Philadelphia, Montreal, and London: Functional Disorders of the Foot, Their Diagnosis and Treatment, by Frank D. Dickson, M. D., F. A. C. S. and Rex L. Diveley, A. B., M. D., F. A. C. S.

Paul B. Hoeber, Inc., New York and London: Intravenous Anesthesia, by R. Charles Adams, M. D., C. M., M. S. (Anes.).

End